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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
Mitchell Bros. Company.
(INCORPORATED.)

Vol. II.

CHICAGO, ILLINOIS, AUGUST 15, 1883.

No. 2.

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ONE DOLLAR PER ANNUM.

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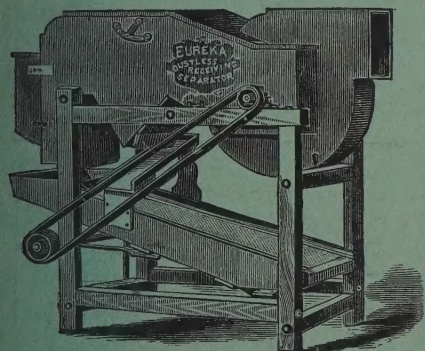
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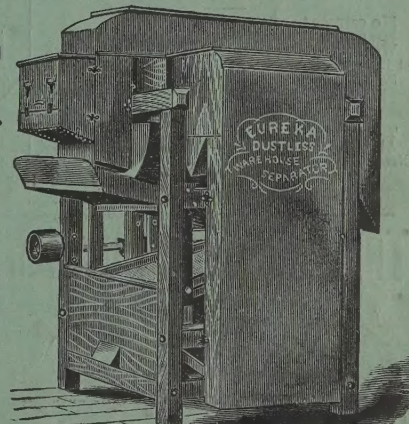
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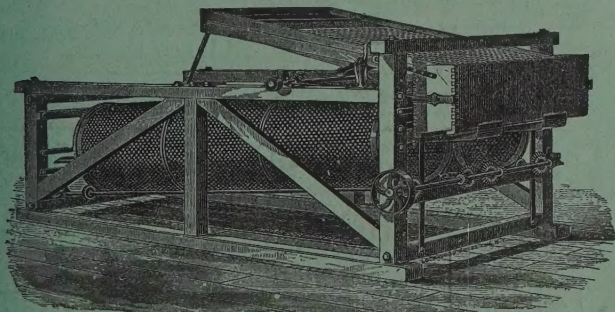


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Mill and Elevator Machinery Furnished at Lowest Rates!

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Dries the most delicate substance thoroughly without injuring the appearance or flavor. It will bring back to grade damp and sticky grain. Does not increase the fire risk. Simple in construction. Furnished at low price. Cost of operation small. In six different sizes, costing from \$250 to \$850.

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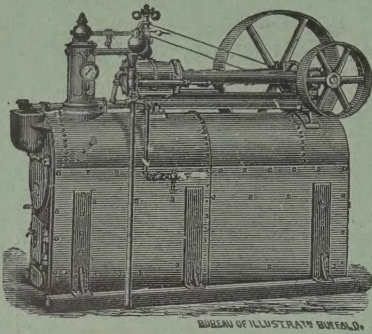
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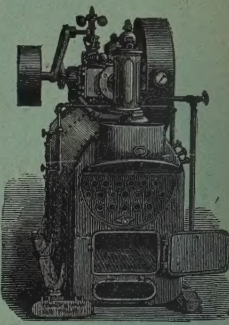
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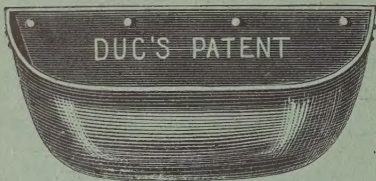
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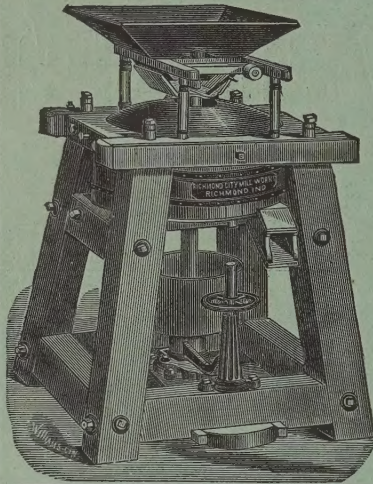
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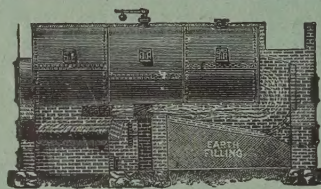
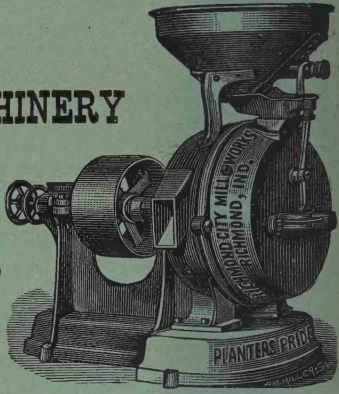
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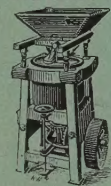
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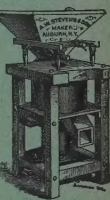
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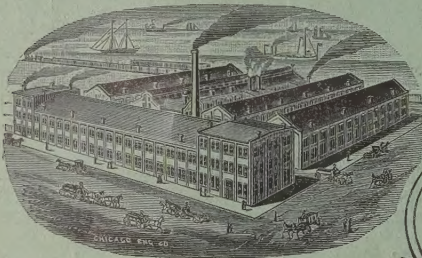
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We build FIVE Classes of Engines.
No Steam-Engine Establishment in the U. S. is as well equipped as ours for doing first-class work.

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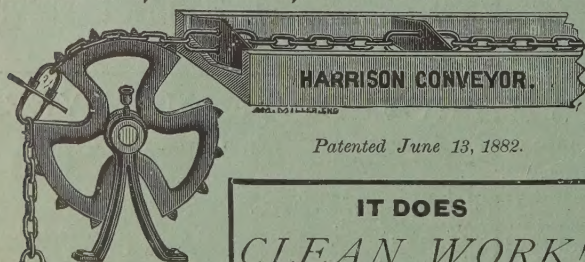
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IT DOES
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MIXING OF GRAIN!

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IT CARRIES

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Steam Engines,

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**ELEVATOR
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We Carry the Largest Stock of Mill and Elevator Supplies to be found West of the Mississippi River.



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THE PORT RICHMOND ELEVATOR AT PHILADELPHIA.

The concentration of all the railroad connections of Philadelphia under two great systems—the Pennsylvania, and the Philadelphia & Reading Railroads, has of necessity given to the latter a prominence as a terminal for all the trunk-line combinations competing with the former, in deliveries at Philadelphia. The value of the Philadelphia & Reading Railroad Co. to these trunk-lines is still further enhanced by the fact that, as the owner of the largest body of anthracite coal lands in the world, it is enabled to furnish in quantities only limited by the demand, anthracite coal to East-bound cars upon their return Westward. The possibilities of the value and amount of this return traffic are only indexed by the recent completion of the Jersey Shore & Pine Creek (with grade not exceeding twenty feet to the mile) connection with the New York Central System, also by the South Pennsylvania Railroad to Pittsburgh, now under construction. The anthracite coal-beds of Pennsylvania at the present time, are important factors in offering to trunk-line managers, by an increased amount of return tonnage, the opportunity to reduce the average cost per ton per mile upon all freight carried; also with the resulting tendency of placing the hard coal within the reach of all prairie farmers. It is the magnitude of the Philadelphia & Reading Railroad Co.'s coal interests that has caused the development of its trunk-line connections and indirectly of its grain trade, and the Port Richmond Elevator was an absolute terminal requirement for the prompt discharge and return of cars.

The elevator is located upon the property of the Philadelphia & Reading Railroad Co. at Port Richmond, upon a pier 600 feet long by 100 feet in width, and is adapted so as to load from both sides, and from the water end at the same time. The pier and foundations were constructed

shipping bins. *Third.* In the transmission of the steam power to engines at the top of the house, and the direct connection of the engines with the main driving shafts.

Four tracks provide room for twenty-four cars at one time. The grain is discharged from cars into large boiler-iron hoppers or tanks, water-tight, and devised from original plans, so that the journals of the pulleys at the bottom or feet of the elevator legs can be reached independently of the hoppers, during any time in the work of unloading, or state of the tide. This arrangement enables relief from choking of a belt within a few minutes, notwithstanding that the receiving hopper may be full of grain. After elevation the grain is discharged into car-load scales, twenty-four in number, and thence by twelve spout-tables to center bins for storage, or to shipping bins for delivery as desired. The elevator legs, eighteen in all, each of 5,000 bushels' capacity per hour, have also suction fans attached to each, so that the weigher may at will, by means of a lever attachment, blow any grain so ordered.

The outside row of bins on both sides and at the water end of the building, are hopped above the general level of the remainder, and high enough to spout to vessels abreast at any one place alongside; below these bins were constructed thirteen shipping or spout rooms,

in each of which are two large cast-iron revolving spouts—one leading directly from the shipping-bin above, and the other from a large pipe connecting with the weigh-scales above. The floors of the shipping-bins are the covers to small storage bins, about 1,500 bushels' capacity each, into which any small identical parcels from the shipping-bins, or special car-lots from track, may be placed. The advantage of the construction is patent, as



THE PORT RICHMOND ELEVATOR AT PHILADELPHIA.

ed in 1879 and 1880, and the superstructure was commenced in April, 1880, and finished ready for business in March, 1881. Aside from the generally uniform construction of the bins by two-inch plank walls (seventy-two feet deep center rows, and sixty-eight feet deep outside rows), the chief points of originality and difference from other elevators are: *First.* In the construction of the receiving tanks. *Second.* In the construction of the

it enables deliveries from the same point of two different kinds of grain to two vessels alongside at the same time, one from the shipping bin, and the other directly from the scales through the direct pipe. Grain from either spout may be returned to the receiving hoppers on the track-floor below, or to the small storage bins spoken of. The valves in the shipping rooms are worked by levers, and on the wharf by rope attachments and pulleys, the latter arrangement working well and generally used.

Another feature worthy of mention is that direct pipes from the hopper scales to the receiving hoppers, as well as through the shipping bins, are constructed and located so that in case of complete filling of all of the bins, grain may be independently discharged to or from cars or vessels alongside.

The steam required is generated by two Galloway Boilers, each seven feet diameter and twenty-eight feet long, and is conveyed by ten-inch pipe about 100 feet horizontally, then 120 feet vertically to two Buckeye Engines of especial pattern, placed on timber foundations resting upon the bin walls. The engines are opposite each other on the level of the weighing floor and placed about one-third of the whole length from one end of the building. The piston shaft of each engine has a crank connection with lines of main shafting, coupled with "Seller's Rigid Couplings," and running the entire length required by the elevator leg pulleys. From pulleys on these main shafts, power is transferred by belts directly to the elevator leg pulleys, nine elevators being driven by each engine, and any elevator belt is thrown in or out at will without reference to the others. Large pulleys are used throughout, and gearing dispensed with, thus enabling slower speeds and no vibration or jarrings.

The best proofs of any beneficial innovations are in the working experiences thereafter, and we are informed by the management that they have not expended any money in alterations, renewals or repairs since steam was introduced over two years ago. The working capacity of the elevator in ten hours, is receiving 350 cars, and delivering 300,000 bushels. From records of work done we select instances, viz.: 303 cars unloaded in nine hours; delivery of 54,500 bushels to steamer in sixty minutes; 33,000 bushels delivered to bark in forty minutes, and others of similar rapidity.

The elevator was constructed by Chas. M. Taylor's Sons from original designs made by Chas. M. Taylor, assisted by William Gleason, the latter of whom had in addition, full charge over all machinery and millwright work.

The receiving hoppers and the Galloway Boilers were furnished by the Edge Moor Iron Co. of Wilmington, Del. The machinery was supplied by Wm. Sellers & Co. of Philadelphia, and the engines by the Buckeye Engine Co. of Salem, Ohio, under specifications furnished by Chas. M. Taylor.

The Philadelphia & Reading Railroad Co. make the Port Richmond Elevator their terminal point of delivery for export grain, and the 20th Street Elevator their terminal point for local grain; all of the fast freight lines of the New York Central and New York, Lake Erie & Western and other trunk-line connections of the Philadelphia & Reading R. R. Co. deliver grain to these points. Both of these elevators are operated under an organization known as The Philadelphia Grain Elevator Co., of which Chas. M. Taylor is president.

A bushel of corn weighing fifty-six pounds will yield between twenty-eight and thirty pounds of glucose or grape sugar, and in adulterating sugar from eighteen to twenty per cent. of the grape sugar is generally used. In Europe potatoes are generally used for the manufacture of glucose, and the manufacturers find larger profits than from corn. A plant called manioc, a native of South and Central America, is said to produce fifty-six pounds of glucose to the bushel. As this plant yields over 500 bushels to the acre, it is not improbable that manioc may be the "sugar cane" of the future. The so-called Brazilian arrow-root and tapioca of commerce are made from the cassava or manioc plant.

One hundred and forty varieties of corn have been planted at the New York State Experimental Farm, under varying conditions. The results cannot fail to be of great value.

Where machinery is used the Drew Oil Cup will save 50 per cent. of oil. Write for circular. Borden, Selleck & Co., Chicago, Ill.

Communicated.

WILL SOME ONE ACCOMMODATE HIM?

Editor American Elevator and Grain Trade:—I am desirous of buying some pure Russian wheat from a good, reliable party. Could you give me any information as to where it could be got? Truly yours,

J. B. MILLS.

Camargo, Ill.

THE CHAIN CONVEYOR PATENTS.

Editor American Elevator and Grain Trade:—We have to rely upon you for information. I want to build a small elevator, and I want to run a chain or belt conveyor. I want to carry with the upper line in one direction, and the lower line in the opposite direction. Are there any patents which cover this construction? I notice several advertisements in your paper, and each claim to be exclusive and to have the only right. I think you will confer a favor upon many of your patrons if you will ask for information. Let the inventors come to the front, giving the number and date of their patents.

Yours respectfully, T. B. SHAFFER.

Cincinnati, Ohio.

ELEVATOR LEGS.

Editor American Elevator and Grain Trade:—We notice in the July number of the AMERICAN ELEVATOR AND GRAIN TRADE a description of an improvement in elevator legs, patented by Mr. Elias Roberts of Chicago, under date of April 11, 1882, and would state that the principle as therein described of telescoping the elevator legs was used by us some eight years ago in the erection of our Twentieth Street Elevator in 1874. Very truly,

THE PHILADELPHIA GRAIN ELEVATOR CO.
Philadelphia, Pa.

PNEUMATIC TUBES FOR GRAIN, ETC.

An interesting enterprise was a few days ago brought to light through the medium of a New York civil engineer, who is in this city, in connection with the establishment of a pneumatic pipe line between New York and Chicago. The plans, as partially developed, are to lay a four-inch iron pipe for the purpose of transmitting letters, messages, grain samples, diamonds, jewelry, or other small and light parcels, at a maximum tariff of ten cents for packages, and five cents for letters, etc. Way stations will be established at Cleveland, Buffalo, and possibly one other point. The pipe will be the ordinary round kind in common use, similar to gas pipe, and the entire length of the line will be made air-tight with brass stations at the points named. The boxes for the conveyance of messages, etc., will be made of sole-leather with wool air-resisters as used at the present time in short pneumatic tubes. Engines of twenty-five horsepower to drive the air-pumps will be placed at the termini, and smaller engines at the way stations. Seventeen patents for various improvements have been secured by the originators of the scheme, and no doubt some of them will be made available in working the line. The plan of operating as far as revealed at present will be about as follows: Commencing at 6 o'clock in the morning, Washington time, the boxes containing through messages, etc., will be fed into the tube at Chicago and "blown" toward New York while the Chicago pump is charging the tube and the New York pump is exhausting the air. The last box, started at Chicago at 6:30 A. M., will be provided with an electric signal attachment which will automatically announce its arrival at Cleveland, where the local quota of boxes are inserted, and later on the same at Buffalo. The last box will arrive at New York at 10 o'clock, the trip being made in about four hours. Then the line will be occupied with the west-bound traffic for the succeeding four hours, and so on alternately, day and night. However, when the second pipe shall have been completed, one will be used for West-bound and the other for East-bound business, thus obviating delays and doing away with the alternating system. With only one pipe it is expected that during each four-hour period 1,000 boxes can be transmitted, each earning about \$2 in freight, or a total of \$12 during the twenty-four hours, being aggregate earnings \$12,000 per day for the line. The total cost of operating the system is estimated at \$1,125 daily, which includes 300 pipe section men (repairers), fifty station operators, and 100 delivery and collection messengers.

The cost of erecting the line will be something less

than \$4,000 per mile, and the entire plant, including engines, etc., will not exceed \$4,250,000. The most serious obstacle to the immediate consummation of the strange scheme is the right of way, but it is said the parties have been working successfully to obtain this. The pipe will be placed underground in the cities, but the bulk of the line will extend along the tracks of certain railways, the pipes in most instances being attached to and swung from the ends of the ties. For certain short distances, for connecting links, the pipe will be laid through fields and along country roads, where it will be placed on jacks and pedestals, or swung along the base of the common board fence. In crossing country roads it will be elevated upon short poles. Three telegraph wires will also be attached to and extend along the pipe to be used for electric signaling between stations. At least one engineer believes the scheme a feasible one, and should it prove a success it is thought another pipe line will be added for the exclusive transfer of grain from Chicago to New York, by which 50,000 bushels could be carried daily for ten cents a bushel, at a profit of \$2,500 per day. Grain placed in the tube here would arrive in New York in about five hours, the transfer time being somewhat slower than the message line. Appliances are now being experimented with by which, with the aid of automatic attachments, the grain pipeline would be continually charged from the bins at the principal elevators here and delivered at a general central elevator in New York. The grain, it is claimed, would be improved by the passage. The capacity of the grain line being only about 18,000,000 bushels annually, it would not seriously interfere with railway traffic as at present established, unless half a dozen or more pipes should be laid. The projectors of the enterprise state that all the money is pledged necessary to carry out the plans expeditiously, and at a conference to be held here on the 26th inst. the full details will probably be made public.

CINCINNATI VIEWS ON CHICAGO TRADING.

An "Observer," in the columns of the *Cincinnati Price Current*, taking it for granted that Chicago is the special center of speculation in produce in this country, inspired apparently by the recent lard corner, notices the methods of doing business here by the brokers, as peculiarly adapted to jeopardize the funds intrusted to them by their country customers. According to this writer, the Chicago dealer makes no regular contract, but sends his customer a simple memorandum of the funds received, with no statement of how used, or who are the buyers or sellers; and for the margins, receipts are given with no reference to how applied. The broker here thus becomes the principal; while in the markets of New York, Cincinnati, and St. Louis brokers are simply agents, showing in their contracts with whom the trades are made, and definitely how the margins are applied. The temptation to a dishonest course, if the ventures in which the broker engages go adversely, and if in the perhaps slow answers of his country customers to second and third calls for margins, he has involved his own capital or credit, are thus greatly increased, and those who have placed their funds, in this informal manner, in his hands, have no recourse. The manipulators keep themselves well informed as to how the orders stand, and how much of any product is long on purchase and when these contracts accumulate raise the price. The broker, understanding the unwillingness of his customers to advance farther margins, assumes himself the risk. But the market under the manipulator still perhaps goes up, and the broker, to save himself, changes his deal, and sells while his trustful country customers lose their investments without redress. The course of our broker is followed by others, until, with a few exceptions in favor of those who have kept their margins up the country funds are all swallowed up in the greedy maw of Chicago speculation. The writer advises outside traders to demand regular contracts and margin receipts, showing with whom they are trading, and where their money has gone, or if not practicable here, make their trades in markets whose methods are such as in those above mentioned. Otherwise a faro bank is as safe a place of investment, as an option deal on the Chicago Board. This is all from Cincinnati, however.

So far this season, the yellow fever has been more fatal on the Chicago Board of Trade than anywhere else. —*Inter Ocean.*

JOHNSON & FIELD'S DUSTLESS GRAIN SEPARATOR.

As our agricultural resources develop and the handling of grain becomes, in consequence, a more and more important industry, the greater need is felt of more perfect grain separating apparatus. When the country was young, the old-fashioned rolling screen was the only form of separator known in mill or warehouse, when any appliance was used at all. Now, however, all who handle grain, from the farmer to the miller, see the advantage of removing foreign substances from their grain before sending it to market or manufacturing it into flour, malt, etc. We illustrate on this page a new Dustless Separator, made by MESSRS. JOHNSON & FIELD of Racine, Wis., long and favorably known as makers of grain cleaning machinery for various purposes. In giving this machine to the public the aim of the manufacturers has been to construct a machine that would do superior work, clean rapidly, run easily, remove all dust and foul stuff without waste, while the machine itself should be strong and durable in every part.

This machine has two distinct combinations of sieves and screens to which blast is applied which performs the same work in one operation that is usually accomplished by running the material through twice. It can be run by horse power as well as by steam or water power, and one horse power can run the machine besides elevating the grain. This accommodates the machine to the uses of a large class of houses that employ horse power. By use of the dustless fan on these machines all dust and chaff can be removed and carried through spouts to the outside of the building, or into a dust box, thereby doing away with the nuisance of having the house filled with dust. In making these machines it has been one of the chief objects of the manufacturers to make them as strong and durable as can be done by skilled labor and the best of materials, the framework being very heavy, made out of thoroughly seasoned white ash. The irons are extra heavy and all fastened on with bolts, with shafts of one and one-half inch in diameter, babbitted boxes; large solid eccentrics, with heavy connecting rods, and brass oil cups on all bearings. The hopper, feed and grain boards are covered with heavy sheet iron preventing the grain from wearing through same.

The capacity of the machines is from 200 to 600 bushels per hour according to size of machine. The height of the machine is five feet four inches, its width varying from five feet nine inches to six feet five inches. The machines are made with and without suction. Although these machines have been on the market but a short time they have met with an exceedingly favorable reception and have already been adopted in a large number of mills and warehouses, in all of which, we understand, they have been giving satisfaction. MESSRS. JOHNSON & FIELD will be pleased to give full particulars to interested parties who address them as above.

W. W. Miller, one of the Flemming & Merriam frauds, was arrested July 17, having all the time managed to evade arrest. He was arraigned before U. S. Commissioner Hoyne and released on \$3,000 bail.

Cincinnati Price Current: Mr. E. Roelkey, chief grain inspector at Baltimore, passed through our city and made a brief stop, within the past week. Mr. Roelkey is visiting Western grain shipping points, at the instance of the Corn and Flour Exchange of Baltimore, with a view of aiding the Western shipper in knowing how the grain of this season will inspect in Baltimore. By personal contact with the shippers he is enabled to pass his judgment on samples submitted, and can undoubtedly be of much service in helping the Western dealer to act understandingly.

THE NEW ILLINOIS WEIGHING LAW AND THE NEW WEIGHMASTER.

A meeting of the Illinois State Board of Railroad Commissioners was held in Chicago on July 6, and continued through the day, the full membership being present. Gov. Hamilton was present during the forenoon, for the purpose, probably, of conferring with them upon the organization of the new State Weighing Department. Geo. Torrence, State Senator from Pontiac, was around during the day, and was appointed State Weighmaster, and John Wade, present weighmaster of the Board of Trade, was appointed first assistant. These gentlemen, together with John A. Reeves of Cairo, were the only competitors for the first position; the latter received necessarily only brief consideration. Senator Torrence, originally from Ohio, is thirty-seven years old, and is considered a fair lawyer. His term of senatorship ends in January, 1885, but is already practically closed. His eligibility has been disputed by some, be-

who may be interested as buyer or seller in the weighing thereof."

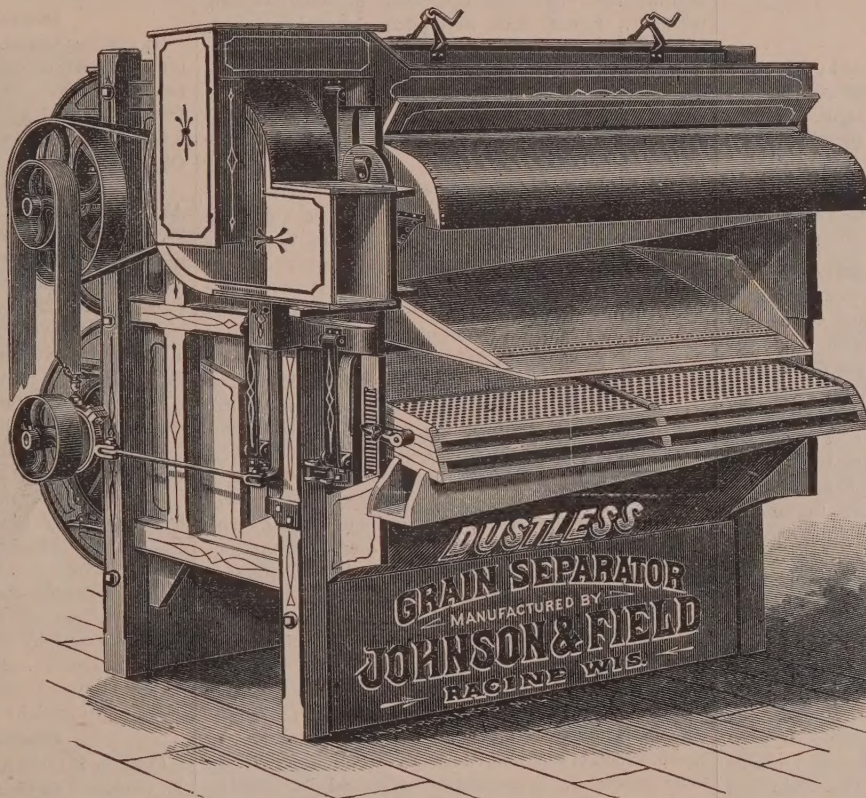
THE PNEUMATIC GRAIN TUBE.

A large party, consisting of railroad men, grain dealers, etc., at the request of the Baltimore & Ohio Railroad Co. visited their machine shops at South Chicago, on July 17, to witness a practical test of Smith's Patent Pneumatic Transfer-Car by means of a working model. The construction is simple and depends upon a current of air produced by a vacuum. From the top of an iron tank, of any requisite size, a pipe extends, connected with a Baker Blower, which is used to exhaust in filling and to blow out in discharging it. From the opposite side of the tank, near the top, a pipe projects and bends downward with an elbow. To this is attached, by means of a rubber joint, a straight pipe which extends into the matter to be elevated or transferred. This rubber joint permits the pipe to be moved about in the grain or substance transferred, as desired. The tank is placed upon a scale for weighing, and the whole apparatus is designed to be mounted upon a car. The operation is as follows: The air is exhausted from the tank, causing a suction or current of air up the filling-pipe, which carries with it the grain or other commodity to be raised or transferred. The suction is at the top. The grain enters the tank near the top and falls to the bottom, because in proportion as the air of the tank is greater than that of the suction pipe, the current in the former is diminished and becomes almost imperceptible, and insufficient to carry over to the blower any of the stuff raised. In the model used the current of air in the tank was only about fifty feet per minute, while it was one and a half miles in the suction-pipe. With a vacuum of one and one-half pounds corn, nut coal and shingle-nails were successfully and very rapidly elevated and transferred. The tank discharges at the bottom, which discharge is accelerated by reversing the blower and passing a strong current of air through a pipe arranged for that purpose and extending from the mouth of the blow-pipe to that of the discharge. This arrangement also provides a means of cleaning the grain as it is discharged. Three men are sufficient to op-

erate one of these cars, which are estimated to cost \$3,000 each. By this system, grain, it is claimed, may be elevated to any height, and it may be applied to elevators.

CORN.

Corn is the special grain crop of our country, last year's yield being nearly 2,000,000,000 bushels. Its plastic nature, adapting itself to an immense variety of conditions of soil and climate, makes its eligible acreage immense, covering an area thirteen times that of Massachusetts. The corn plant readily lends itself to the trials and advantages of crossing or hybridizing. The pollen granules of the male plant float easily from the silky tassels of the ear, and are readily received by the female flower at its base, which are as likely to be fructified by varieties adjoining as from their own stalks. These favorable conditions should stimulate producers to careful selection in the matter of seed, and in experiments in crossings, in order to obtain the varieties best adapted to their localities that will give the largest yield or have other qualities that specially fit them for food. Corn is a plant whose capacities for improvement and utility are almost unlimited. The bread of our tables in large and excellent varieties, the pork and beef that are its companions, the force of our working animals, even to the one most valued—the horse,—the starch and sugars in large proportions of the grocery and the factory, all come from our grand fields of Indian corn that cover our prairies, waving in infinite forms of strength and beauty.



JOHNSON & FIELD'S DUSTLESS GRAIN SEPARATOR.

cause of this senatorial office, but the objection seems not to be valid, and the appointment is pronounced "satisfactory." Mr. Wade has an established reputation, and is thoroughly well qualified for his new position. The salaries were not fixed, but will probably be \$3,000 for the weighmaster, and \$2,000 for the first assistant. It was decided to open a set of rooms on Aug. 1, in Chicago, in the vicinity of the present Grain Inspector's office. A set of rules were considered for the government of the office. The following is the portion of Rule 15, which relates to the weighing of grain:

"The State Weighmaster is hereby authorized to collect until further notice the following fees upon all grain, or other property weighed by him, or under his supervision:

"For inspection of scales and supervising the weighing of grain received from cars and canal boats into elevator (where notice is given in advance to the State Weighmaster, or his assistant in charge, that a certificate of weight on such grain is desired), 15 cents per car load, \$1 for boat load, or fractional part thereof, and 15 cents per 1,000 bushels from vessels.

"For supervising the outweighing of grain from elevators, 20 cents per 1,000 bushels; to vessels or canal boats, 15 cents per car load; 5 cents for wagon load; 30 cents per car load of grain, or similar article in bulk, at regular transfer stations. The above fees shall be collected from the receiver or shipper of said grain in whose name the property shall be held at the time of weighing; and the party paying said fees may collect one-half of this amount so paid from any other party

Legal Notes.

Principal and Agent.

Where an agent enters into a contract without disclosing his principal or agency, the principal, if he takes advantage of the contract, must do so subject to all the rights and equities of which the other contracting party, who had no knowledge of the agency, might avail himself as against the agent, assuming the latter to be a principal.—*Miller's Executrix vs. Sullivan & Co., Supreme Court of Ohio.*

Sale—Delivery—Waiver.

Plaintiff sold defendant 3,000 bushels of wheat to be delivered at a place twelve miles distant, and to be transported by teams. Held, that a single delivery of all the wheat was neither reasonable nor contemplated by the contract, and that refusal to receive, after a part of the grain was delivered, was a waiver of any subsequent offer or tender by the plaintiff.—*Roberts vs. Mazeppa Mill Company, Minnesota Supreme Court.*

Mortgage of Crops.

A mortgagor in possession is entitled to all crops grown upon the land until the mortgagee has, in some lawful manner, abridged that right. Where creditors of the mortgagor levied execution upon and bought the crops, before the receiver was appointed under the mortgage, the right vested by such a sale cannot be defeated by the subsequent appointment of a receiver.—*Favorite vs. Deardorff, Supreme Court of Indiana.*

Contract—"Futures"—Wagers.

Where a contract is made for the delivery or acceptance of securities at a future day, at a price named, and neither party at the time of making the contract intends to deliver them or accept them, but merely to pay differences, according to the rise or fall of the market, the contract is a gambling one and is void as contrary to public policy. 2. The indorser of a promissory note given on account of such dealings as are recognized as gambling transactions can rely upon their illegality as a defense to an action on the note. In an action to recover money where the defense set up is that the contract was a stock gambling one, the real question for determination is the *bona fides* of the transactions. It is not the form, but the intent with which the scheme was planned. If neither party contemplates that there should be a delivery of the stock, but merely to pay differences, according to the rise or fall of the market, the contract is a gambling one.—*Justh vs. Holliday, Supreme Court, District Columbia.*

Contract of Sale.

In May A and B went into a verbal agreement of sale by sample of two car-loads of barley. The grain had been consigned to A, who had removed it from the cars to an elevator, where it was held in his name and for his account. A and B resided in Minneapolis, Minn., where B was a brewer, and was in the habit of purchasing and receiving large quantities of barley from A on the railway track at Second street, in the city near the brewery, whence he took it in his wagons. The barley lay in the elevator until July, when, at the request of B, it was sent down in cars to Second street. There B, who had had an order on the elevator on which it was put in the cars and sent down, inspected the grain and refused to accept it as unfit for use. He notified A, who, claiming that the grain was delivered at the time it was put in the elevator, sued for the price. B had never seen the barley before it was sent down to Second street. The jury found for B, and A appealed the case (Taylor vs. Mueller) to the Supreme Court of Minnesota, where the judgment was affirmed. Judge Vanderburgh, in the opinion, said: "To constitute a delivery, the amount of the purchase being more than \$50, there must have been some act on the part of the defendant shown which would indicate an unconditional acceptance and appropriation of the grain. We think the defendant, in good faith was seeking a delivery of the grain purchased by him, and his act in procuring a delivery order, under the circumstances, in ignorance of the condition of the barley, had reference solely to its delivery, and was not an acceptance. The offer to prove a special custom of delivery from the cars was properly rejected. There was nothing to show that it was an established, general and uniform usage."

The N. Y. *Daily Commercial Bulletin* in its issue of 8th inst., says: "Of the New York stock of two and a half million bushels No. 2 red winter wheat, over

two millions are stored in Brooklyn, and the condition of it is constantly suspected, as a large part of it has been mixed and doctored to make the grade; 36,566 bushels stored at Woodruff's A and B, originally inspecting No. 2 red winter on October and November receipts, posted to-day as having a strong smell. The weather is warming at the West, and a higher temperature is expected here, and it is apprehended that the stock is in no condition to stand hot weather."

GRAIN ELEVATOR AT BORDEAUX, FRANCE.

The new grain elevator at this port is now ready for work, the trials having proved very satisfactory. The opening ceremony took place in the presence of the principal grain merchants and representatives of the shipping and railway companies. The first trial made was to unload forty tons of grain from a vessel, weigh it for the customs officers, the captain, and the receiver, and then put it into barges, the time occupied being fifteen minutes. This was equivalent to about 150 tons per hour. Twenty tons were next elevated, weighed, winnowed, and sifted, then re-weighed, and put into a barge, all in fifteen minutes. The next experiment occupied the same time—fifteen minutes—and consisted in elevating, weighing, and sifting twenty tons of grain, sacking it in bags of 80-kilos, and placing it in railway wagons; and in the final trial twenty tons of grain were unloaded, winnowed, sifted, and elevated to a warehouse twenty yards distant from the quay, and thirty-two yards from the deepest part of the ship's hold. Considerable advantages are expected to be gained by shippers in the use of this elevator. The time required to discharge vessels will be materially lessened. Hitherto a steamer of 1,500 tons was granted seven days to discharge, and a sailing vessel of the same tonnage twenty-five days. The steamer was allowed less time as it had steam cranes at its disposal. Every day a vessel was detained over the stipulated time the consignee had to pay from £20 to £40 in the case of a steamer and £12 to £24 in the case of a sailing vessel, as demurrage. The new elevator will discharge a cargo of 1,500 tons in ten hours—an ordinary day's work. The reduction in expenses to the grain merchants must be considerable, as a steamer will generally be unloaded and ready for sea in four days, against a previous average of twelve.—*The Miller [London. Eng.]*

A NEW GRAIN DRIER.

Mr. W. H. Applegate of Atlantic, Iowa, has recently obtained a patent for a machine for drying grain by steam, which is represented as very ingenious and likely to be successful. It consists of a bricked in chamber made in varying sizes, at the bottom of which is a steam heat radiator perpendicular to which thin sheets of wire cloth in rows of two each, with interspace of 1¼ inches, are arranged so as to form departments in which the rows are 2¼ inches apart. The grain falls between the sheets, and is held there until the heat passing up on both sides sufficiently dries it, when it is let out by discharge valves, evenly dried in all the departments; at the same time the undried grain is admitted at the top, keeping the divisions constantly full. The different sizes give drying surfaces of from 1,000 to 12,000 square feet, the latter affording a capacity of 1,500 bushels at once of new corn, and more of that which is partly dried. The drier is inexpensive, and the fire hazards are nominal, as steam alone is used in it. This machine was exhibited at Des Moines where it is urged that a new elevator should be built, containing one of these driers, whereby "100 cars a day of new corn" could be handled, thus immensely increasing the amount and relative value of their grain trade. The apparatus, Mr. Applegate states, has been fully tested, and there is to be a ten-car drier built at Atlantic and operated in his own elevator.

Grain was loaded for the first time at Newport News, Va., in July, 1882, the vessel going to Cork for orders. One also sailed for Trieste about the same time. The steamer "Roland" carried as much as 80,000 bushels sent to Europe from Peoria, Ill. In July and August, 1882, no less than 900,000 bushels were exported from here to Europe, the business becoming so heavy that it seriously menaced the company's coal trade, and, pending the building of the huge elevator here, had to be partially abandoned, the facilities for handling such large quantities being inadequate.

Late Patents.

Issued on July 10, 1883.

GRAIN CAR DOOR.—Jairus J. Treat, Detroit, Mich. (No model.) No. 280,972. Filed Feb. 20, 1882.

DRIVE CHAIN.—Adolph Assmus, Chicago, Ill. (Model.) No. 280,780. Filed Sept. 18, 1882.

ELEVATOR BUCKET.—Henry W. Caldwell, Chicago, Ill. (No model.) No. 280,909. Filed May 10, 1883.

FANNING MILL.—Charles S. Beebe, Racine, Wis. (No model.) No. 280,897. Filed Dec. 7, 1881.

FANNING MILL.—Charles S. Beebe, Racine, Wis. (No model.) No. 280,898. Filed May 26, 1883.

GRAIN ELEVATOR.—William Watson, Memphis, Tenn. (No model.) No. 281,214. Filed March 26, 1883.

AUTOMATIC GRAIN METER.—Elihu M. Thorpe, Wapella, Ill. (Model.) No. 281,164. Filed May 21, 1883.

WHEAT CLEANER.—Dandridge P. Motley, Rexburg, Va. (No model.) No. 281,115. Filed March 27, 1883.

Issued on July 17, 1883.

GRAIN ELEVATOR.—Nathaniel G. Simonds, Charlestown, assignor of one-sixth to Frederic McMellon, Boston, Mass. (No model.) No. 281,572. Filed May 15, 1882. Renewed April 13, 1883.

GRAIN SEPARATOR.—Josiah M. Welbourn, Edison, Ohio. (No model.) No. 281,589. Filed May 4, 1883.

PROCESS OF DRYING GRAIN.—Ferdinand Schumacher, Akron, Ohio. (No model.) No. 281,402. Filed April 23, 1883.

Issued on July 24, 1883.

DRIVE CHAIN LINK.—August S. Held, Freeport, Ill. (Model.) No. 281,995. Filed Oct. 16, 1882.

TWO-WHEELED VEHICLE.—Frank A. Maus, Indianapolis, Ind. (No model.) No. 281,896. Filed Jan. 3, 1883.

MEANS OF ATTACHING ELEVATOR BUCKETS TO BELTS.—Frederick A. Wittich and Peter W. Strader, Ashtabula, Ohio. (No model.) No. 281,746. Filed May 12, 1883.

GRAIN SEPARATOR AND GRADER.—Pieter Van Gelder, Sowerby Bridge, County of York, England. (No model.) No. 281,808. Filed Sept. 26, 1882. Patented in England June 21, 1878. No. 2,470.

GRAIN DRIER.—Joel C. Slaughter, Chestertown, Md., assignor of one-half to Henry B. Slaughter, Kansas City, Mo. (No model.) No. 282,013. Filed April 18, 1883.

STEAM ENGINE.—Franklin D. Cummer, Detroit, Mich., assignor to the Cummer Engine Company, Cleveland, Ohio. (No model.) No. 281,843. Filed Sept. 7, 1881.

Issued on July 31, 1883.

COCKLE MACHINE AND GRAIN SEPARATOR.—Thomas M. Bales and Jacob A. Jackson, Des Moines, Iowa; said Bales assignor to William Hemphill, same place. (No model.) No. 282,036. Filed April 23, 1883.

FANNING MILL.—Delos Carpenter, Orion, Mich. (No model.) No. 280,050. Filed Feb. 28, 1883.

GRAIN ELEVATOR.—William Watson, Chicago, Ill. (No model.) No. 282,424. Filed May 23, 1883.

GRAIN ELEVATOR.—William Watson, Chicago, Ill. (No model.) No. 282,425. Filed June 1, 1883.

GRAIN SEPARATOR.—P. Van Gelder, Sowerby Bridge, County of York, England. (No model.) No. 282,415. Filed March 2, 1883. Patented in England July 18, 1882. No. 3,415.

AUTOMATIC GRAIN MEASURE.—Wilber R. Dunkel, near Macon, Ill. (No model.) No. 282,063. Filed Feb. 13, 1883.

SCOOP.—Robert T. Pettibone, Wyoming, Pa. (Model.) No. 282,363. Filed May 10, 1883.

MACHINE FOR CLEANING FLAXSEED.—Lyman Morgan, Port Washington, Wis. (No model.) No. 282,211. Filed Dec. 5, 1881.

AUTOMATIC WEIGHING MACHINE.—Carl Reuther, Hennef, Prussia, Germany. (No model.) No. 282,226. Filed June 19, 1882.

Issued on Aug. 7, 1883.

STEAM CANAL BOAT.—John Pous, Baltimore, Md., assignor of one-half to Christian Cook, same place. (No model.) No. 282,923. Filed March 1, 1883.

DRIVE CHAIN.—Chester A. Weller, Sing Sing, assignor of one-half to Emil Herzig, New York, N. Y. (Model.) No. 282,689. Filed Dec. 27, 1882.

FANNING MILL.—Thomas R. Rosier, San Jose, Cal. (No model.) No. 282,568. Filed April 26, 1883.

GRAIN ELEVATOR.—William Watson, Memphis, Tenn. (No model.) No. 282,812. Filed March 26, 1883.

THE HAMILTON-CORLISS ENGINE.

After years of service the Corliss type of engines may still be said to be the favorite in the United States. We give on this page an illustration of a new engine, the "Hamilton-Corliss," which is now being made from new patterns by the HOOVEN, OWENS & RENTSCHLER Co. of Hamilton, Ohio. This company is already well known, and their saw mill machinery and engines enjoy an excellent reputation. The makers of this new engine, therefore, believe that they have a correct knowledge of the wants of steam users, and invite an examination into the details and working of the Hamilton-Corliss.

All parts of the engine are made from drawings and symmetrically proportioned to the size of the engine. All the smaller parts are made to gauges, so that no difficulty will be experienced in duplicating any part when wanted promptly, for repairs. The cylinders are made of the best grades of C C iron, hard and strong; and the shafts are of hammered wrought iron with long bearings, the diameter of which equals one-half the diameter of the cylinder. Special care is taken in the pillow block

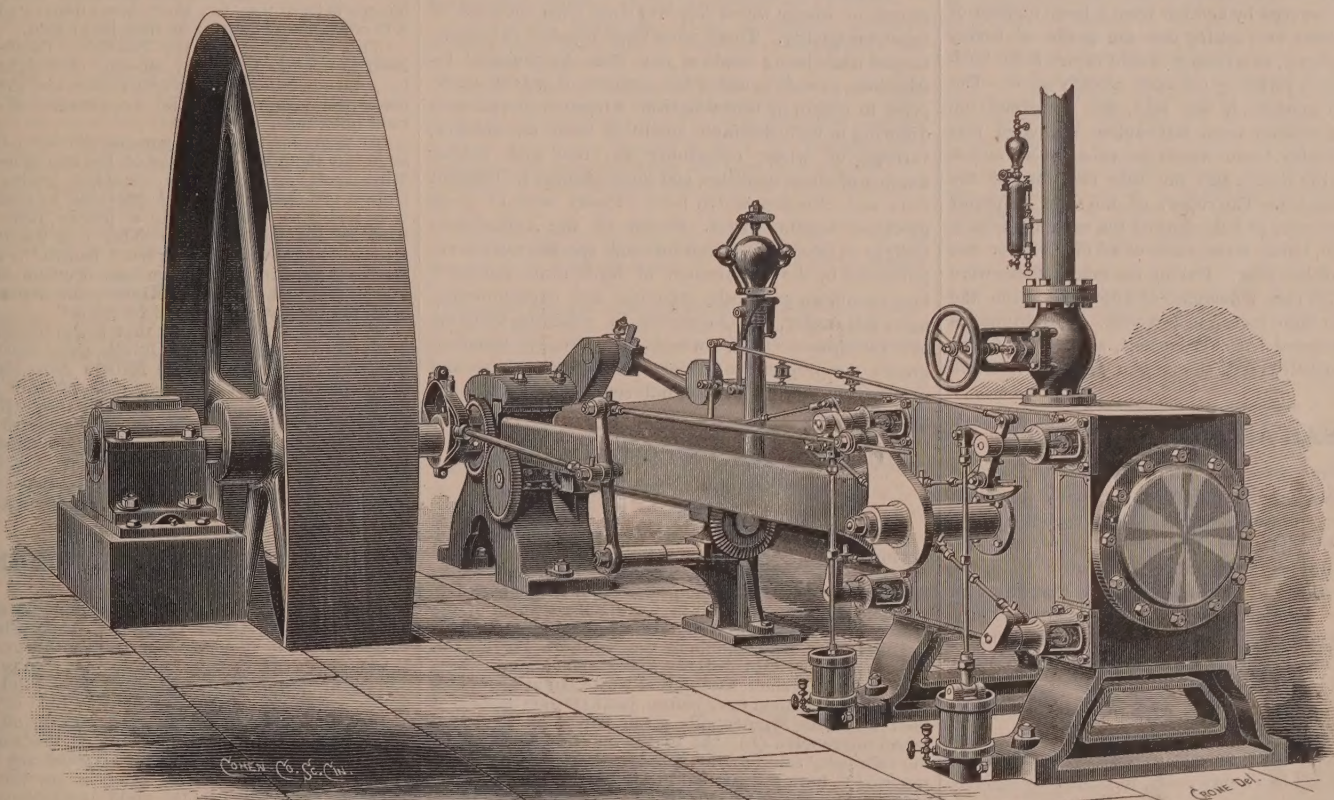
desired particulars respecting their engine, prices, etc., to interested parties, on application.

ELEVATORS IN MANITOBA.

A meeting of the Board of Trade of Winnipeg, Manitoba, was recently held to consider the matter of securing the establishment of a storage system in that city, at which resolutions were unanimously adopted strongly recommending the project. The resolutions were to the effect, that the grain interests of that section rendered a system of storage elevators, erected somewhere in the province, absolutely necessary; and that Winnipeg was the natural and most convenient center, and that the Board pledge themselves to assist, in every practicable way, all efforts made toward securing that end. The Dominion Government had provided a system of grain inspection for that city, and had left the selection of the inspector to this Board, and the elevator system was essential to rendering these powers of any practical value. The Council were instructed to communicate at the earliest opportunity with the managers of the Cana-

INCREASING OUR CORN CROP.

While wheat will always hold the highest rank for its breadmaking qualities, for its variety of uses, its adaptations to a vast extent of soil, its productiveness and ease of cultivation, corn is by far the most important cereal of this country, and is steadily gaining the position of the king among grains everywhere. Last year the corn crop, regarded as a short one, compared with the largest wheat harvest we have ever had, trebled its amount, while it was nearly twice as large as our total crop of wheat, rye, oats and barley. Besides the large varieties of forms in which it furnishes wholesome and excellent food for man, feeds our working animals and fattens our pork and stock, it has become a most important commercial factor in the production of glucose, starch, alcohol, and to some extent is used for beer; while valuable oil has been made from the grain, and its stalks have furnished sugar and syrup. The yield per acre, under high cultivation, has reached over one hundred bushels, while its maximum under ordinary cultivation is seventy bushels, and its average for the



THE HAMILTON-CORLISS ENGINE.

and cross head for adjustment, and for properly taking up the wear.

Among the points to which the makers direct special attention, are the following: All its parts are readily accessible. No part of the regulating medium enters the steam chest out of sight of the engineer and subject to the corrosive action of steam and the oil used for lubricating the valves and piston. With their new High Speed Governor, irregularity is reduced to a minimum, and the motion of the engine is regular under varying loads and steam pressure. A saving of fuel is guaranteed of from thirty-five to forty per cent., or an increase of that much power over the best type of slide valve engines. A saving in oil, wear of engine and boilers, grate-bars, pumps, pipes, furnaces, reduced boiler pressure, and in consequence, greater safety, as compared with ordinary types of engines, are claimed for the Hamilton-Corliss.

The makers of this engine announce that in quality and quantity of material used, in workmanship and finish, they intend it shall be second to none in the market. We note the performance of one of these engines, an eighteen by forty-two high pressure non-condensing engine in "Carr & Brown's Mill" at Hamilton. With two boilers sixty inches in diameter, fourteen feet long, and containing forty-five four-inch tubes in each, the mill made flour using only twenty-six and two-third pounds of nut and stock coal per barrel. Fourteen sizes of these engines are made, ranging from 12x30 to 24x60 in size. The manufacturers will be pleased to give any

dian Pacific, Manitoba Southwestern, and Manitoba Northwestern Railroads, to ascertain what facilities these companies will afford to any parties embarking in the enterprise, and to use their influence to obtain the most favorable terms. In the discussion that ensued, the great losses that already had occurred in grain, and the expense of sacks, etc., were mentioned. It was suggested that a joint stock company should be formed, and that the city should offer a bonus to encourage the enterprise. Others thought that the railway companies should build elevators both at Winnipeg and Port Arthur, for the benefit of traffic in grain. The *Winnipeg Commercial*, in commenting upon this matter, says that an elevator system at both these points would be of immense mutual advantage and benefit the grain interests of Winnipeg. All that is required is, that the Canadian Pacific give to both places equal advantages with towns farther west as to through freight rates, and two prosperous grain storage systems would result, to a large extent mutually interdependent and co-operating for mutual interests. The city council have already offered exemption from taxation to parties constructing public elevators.

In Nebraska, as high as a hundred bushels of oats per acre, has been a common yield this year, according to A. A. Talmage of St. Louis.

The U. S. Government is using large numbers of The Howe Scales. Borden, Selleck & Co., Agents, Chicago, Ill

whole country is twenty-six bushels, that of wheat being a little over twelve bushels. Taking the minimum as ten bushels, the average ought easily to be brought up to the mean of forty bushels. While severe storms, drouth and heavy frosts may not be averted, the main elements of successful cultivation are under the farmer's control. He may carefully select the best seed; he may prepare his ground thoroughly and carefully cultivate the plant; he may do much to protect it from wet and drouth by proper drainage, and by a study of the Department Reports learn by what means he may save his grain from the ravages of insect pests. There is too much slovenly cultivation of large corn fields, too little care and judgment used in better cultivation, giving larger and more remunerative yields, to the individual farmer and the whole country.

The members of the Chicago Board of Trade have quite generally sympathized with the telegraph operators and many of them talk of decisive measures against the Western Union.

Nominally, a carload is 20,000 pounds. It is also 70 barrels of salt, 70 of lime, 90 of flour, 60 of whiskey, 200 sacks of flour, 6 cords of soft wood, 18 to 20 head of cattle, 50 or 60 head of hogs, 90 to 100 head of sheep, 9,000 feet of solid boards, 17,000 feet of siding, 13,000 feet of flooring, 40,000 shingles, one-half less of lumber, one tenth less of joist, scantling and other large timbers, 340 bushels of wheat, 400 of barley, 400 of corn, 680 of oats, 300 of flax seed, 366 of apples, 340 of Irish potatoes, 360 of sweet potatoes, and 1,000 of bran.

THE RAILROAD AND WAREHOUSE COMMISSIONERS.

The Illinois Board of Railroad and Warehouse Commissioners, at their recent session in this city, besides attending to the organization of the weighing department and official appointments made some changes in the rules of grain inspection, to go into effect August 25. The rules as changed are as follows:

RULE I.—WINTER WHEAT.

No. 1 white winter wheat shall be pure white winter wheat, or red and white mixed, sound, plump, and well cleaned.

No. 2 white winter wheat shall be white winter wheat, or red and white mixed, sound and reasonably clean.

No. 3 white winter wheat shall include white winter wheat, or red and white mixed, not clean and plump enough for No. 2, but weighing not less than 54 lbs. to the measured bushel.

In case of the mixture of red and white winter wheat, it shall be graded according to the quality thereof, and classed as white winter wheat.

Turkish red winter wheat to be inspected as heretofore, but kept separately.

RULE IV.—OATS.

No. 2 white oats shall be seven-eighths white and equal to No. 2 in all other respects.

No. 2 oats shall be sweet, reasonably clean, and reasonably free from other grain.

The petition of a number of prominent grain receivers to the effect that a change be made in the rules as to barley, was answered by another from a large number of brewers, malsters, etc., asking that the grade of barley remain unchanged, as a change would injure their business and affect injuriously contracts already made. The grade at other markets, it was said, had remained the same, while a circular from Milwaukee intimated that the grade of barley there would be raised. No action was taken by the Board, and the rule remains for the present unchanged. The report of the late Inspector Price for the month of July showed the earnings to have been \$9,869.45, being an increase of \$3,176.62 over the same period of last year. During the month there were inspected 16,746 cars, a decrease of 1,944 cars from the number in the same month of last year. The shipments for July aggregated 7,755,917 bushels, as against 6,408,844 bushels in July, 1882, showing a gain of 1,349,073 bushels.

KANSAS AS A GRAIN STATE.

Mr. Wm. Sims, secretary of the Kansas State Board of Agriculture, has recently published a valuable pamphlet on the resources of that state, and had it translated into the German, Swedish and Danish languages, and distributed gratuitously. Kansas is the central state, the geographical center of the Union being at Fort Riley in Riley county. Her territory is equal in extent to England and Scotland combined, and of her nearly 40,000,000 acres of land 18,000,000 are occupied and more than 11,000,000 are being cultivated by a population a little less than one million. Wheat, corn and oats, with hay, constitute the four great staple crops of the state. The following comparative reports of her cereal crops in seasons separated by twenty years, indicates the rapidity of their increase:

In 1862 there were but 9,630 acres in wheat, and the production that year 202,232 bushels. In 1882 1,602,997 acres were planted, and the total production 35,734,846 bushels. Of corn in 1862 there were 170,365 acres, producing 6,814,600 bushels, and in 1882 the acres planted amounted to 4,441,836, with production 157,005,722 bushels. Of oats in 1862 there were 2,936 acres, producing 96,892 bushels, and in 1882 the number of acres sown 529,234, and bushels produced, 21,946,284.

Rye and barley did not figure in the reports of 1862; but in 1882 there were 204,662 acres in the former, producing 4,456,400 bushels, and of barley there were 8,746 acres, and a production of 244,888 bushels.

"Present information from Europe," says the *Public*, "does not warrant the expectation that the exports of wheat will be as large as they were last year, and in that case, as we showed last week, the surplus for another year is likely to be 63,000,000 bushels. Nothing can be clearer than that the price of wheat must decline, if the estimates warranted by present information are justified by the harvest. This country will not carry over as much as 50,000,000 bushels without a decline much below \$1.15 per bushel at New York."

The *New York Commercial Bulletin* says: "Samples were exhibited to-day (July 30) by McGinnis, Earing & Walsh of some Australian white wheat and club white wheat grown in Walla Walla county, Ore. The white Australian samples represent a superior growth of six-rowed heads, pronounced by experienced grain men here to be the finest specimens they ever saw. Yield, 45 bushels per acre. The club wheat samples are equally fine

for their kind, although raised on land formerly regarded as of no account for wheat growing, and the yield is said to be 40 bushels per acre."

IMPROVING GRAIN BY SELECTION.

A very interesting and valuable article appears in the July number of the *Popular Science Monthly* by Mr. James Chrisman on the history and importance of selection in grain growing. This principle has long been understood by stock breeders, and has been extensively adopted with increasing success and a rapidly widening range of utilization. The writer attributes the origin of the practice of grain selection for seed to Maj. Hallett, F. L. S. of Brighton, Eng., who planted in 1861 a few seeds of a variety of wheat called Bellevue Talavera. This is a spring wheat, and was then supposed to be incapable of enduring the frosts of winter. Only one of the ten seeds planted by Mr. Chrisman from the same ear produced a plant that survived the winter, but this one was as vigorous and thrifty as any of the winter varieties by its side. From this plant a continuous growth of winter wheat has ever since been obtained, of excellent quality. There are a large number of experimental trials being made at our State Agricultural Institutions, as well as under the auspices of private enterprise, to obtain by selection from a number of varieties, differing in their desirable qualities from one another, varieties of wheat containing the best and largest number of these qualities, and those adapted to different soils and climates, which have already been of great practical benefit. Prof. Blount of the Agricultural College of Colorado, whose full and specific reports are published by the Department of Agriculture, has for a long time been practically studying and experimenting upon this matter, and his success in obtaining valuable new varieties of "fixed" wheats has already benefited greatly our progressive farmers. The subject is large and prolific, and worthy of the universal consideration of grain growers.

DULUTH AND MINNEAPOLIS AS WHEAT CENTERS.

A few days ago the *Pioneer Press* published the following article: "A leading member of the Millers' Association was interviewed yesterday regarding recent publications concerning the prospects of active and dangerous competition at Duluth for the hard wheat of the North, or that section which is made equally tributary to Duluth and Minneapolis by the Northern Pacific and Manitoba roads. He did not regard the danger as of a formidable character, saying that while Duluth got more wheat last year than ever before, but 3,000,000 bushels of the crop of the Minneapolis grain belt went to the unsalted metropolis. (1.) 'As to the question of favors by the railroads,' said he, 'the Northern Pacific is currently reported to have a warm feeling for Duluth, and to discriminate against Minneapolis and St. Paul in the matter of freight rates. (2.) The reason for this is that the Northern Pacific, on account of certain traffic arrangements, is compelled to furnish a stated amount of freight for lake vessels, or put up the cash in lieu thereof; hence, in order to secure this freight for Duluth, it offers special inducements in the way of low freights over its line on wheat and produce. (3.) Now this amount is not so large as to be cause for alarm in Minneapolis over the growth of the Duluth grain market. I will not say that it is as easy now to break down prices in Duluth by free offering of grain as it has been in the past years, but this is because a limited number of millers in Western New York require a certain amount of our hard wheat to mix with the soft wheat of their localities, and produce a flour that will sell well. They have felt the force of the popularity of Minnesota flour in decreasing sales and lower prices for their own product, and they adopt this means of keeping up a market for their inferior flour. They cannot afford to let the heavy capital invested in their mills lie idle because Minnesota flour is so popular. Nor can they afford to buy and grind our hard wheat exclusively. They must use their own wheat, and they can make a fair flour by mixing our wheat with it. No, I do not think our people need fear Duluth competition. We have buyers in the same districts where Duluth gets wheat, and they get a share of it. Again, the Minneapolis grades and inspection are confessedly stricter than Duluth's, so that the statements of some parties that Duluth gets the cream of the wheat of the North is not true. The wheat that goes to Duluth will not pass muster in Minneapolis under Duluth inspection.'"

Whereupon the *Duluth Journal of Commerce* comments as follows:

"In the above article the leading member of the Millers' Association delivers himself of several glaring mis-statements, and makes use of some language that we would like to have explained: (1) 'He did not regard the danger as of a formidable character, saying that while Duluth got more wheat last year than ever before, but 3,000,000 of the crop of the Minneapolis grain belt went to the unsalted metropolis.' If he will kindly ex-

plain what constitutes the Minneapolis grain belt, 'we can judge how far we were trespassing upon Minneapolis' preserves, and govern ourselves accordingly, as the small quantity needed for the Western New York millers can undoubtedly be picked up without the risk of incurring the enmity of the city at the Falls. Duluth only received 4,676,799 bushels of wheat on the crop year of 1882, and as only about 3,000,000 bushels of it were from the Minneapolis grain belt it will readily be seen that if they will give us the metes and bounds of the territory they own, Duluth will leave it to their tender mercies. (2.) 'As to the question of favors by railroads,' said he, 'the Northern Pacific is currently reported to have a warm feeling for Duluth, and to discriminate against Minneapolis and St. Paul in the matter of freights.'

"It will be a surprise to our citizens to hear that the Northern Pacific is discriminating in our favor; the notion has been prevalent that it has been the other way if anything. The rates to and from Minneapolis, St. Paul and Duluth to the Red River Valley and points West are, as the 'leading member' knows, identical, and he will have to cite cases to show discrimination. We have never heard it charged that there was difference in rates; it has been charged, however, that there was discrimination in favor of Minneapolis in regard to furnishing cars; the Northern Pacific undoubtedly fails to get grain to either city as promptly as the shippers desire at times, but we believe they use their best endeavors to forward it to consignee wherever he may be located.

"The statement that the Northern Pacific obligates itself to furnish a certain amount of freight to vessels for return cargoes is the veriest bosh, and the man who made the statement should be ashamed of displaying such ignorance.

"As to grades, the 'leading member' knows, if he knows anything about the inspection of the two cities, that the Minneapolis millers had to establish grades similar to Duluth last season, and that previous to that time they were trying to avoid paying a proper price for No. 1 hard, by not having either Nos. 1 or 2 hard on their grade. He knows also that 'No. 1 Duluth' is a synonym for No. 1 hard in Eastern markets. Further, it is a well-known fact that grading at Minneapolis depends largely upon the supply and demand for wheat.

"We are inclined to think that the publication of the first article in regard to the Duluth wheat market is considered a 'bad break' by the Millers' Association, hence this explanation. It is a clear case of 'sour grapes' on the part of Minneapolis, and we hope they will keep the matter going as it will only the more conclusively show to the farmers of the Northwest that the existence of a powerful competitor for their wheat at this point is money in their pocket, and they don't care a snap of their finger for either place so long as they obtain good prices for their grain."

WHITE EGYPTIAN CORN.

An agricultural exchange thus recounts the advantages of this variety of corn introduced from China many years ago: The advantages of raising this grain are: 1. It will give a big yield on soil too poor to produce any other grain crop. 2. It will grow in ground too dry to produce even rye or barley, the two next dryest crops. 3. It requires no threshing; just cutting off the heads being all that is necessary, and that is less work than to husk other corn. 4. It can be harvested any time from August till Christmas, being ready at any time that you are ready to harvest. 5. Its yield is greater, and it is more valuable stock or team feed, pound for pound, than any other grain. 6. It is one of the most healthful and palatable articles of food ever brought to the table, either ground and made into buns, cakes, puddings, etc., or cooked whole as a substitute for rice. 7. It leaves on the ground, when summer feed is gone, immense quantities of green stalks, leaves and heads, which are greedily eaten, and are of the greatest value for fall pasture of all kinds of live stock.

The wheat crop of Dakota promises at least 20,000,000 bushels.

Describing Moscow, an Idaho paper says: "To enable the farmers to handle this large crop, a movement is now under way to erect a large grain elevator, on the Chase plan, near where the depot grounds are to be located, so that grain can be unloaded from the wagons and at once run through a large cleaner, which will have a capacity so that it will clean the grain as fast as it can be unloaded from half a dozen wagons. The elevator will have a capacity of storage for 100,000 bushels of wheat in bulk, and the same amount in sacks, with three large bins for loading grain. The receiving capacity will be 10,000 bushels per day. The machinery will be run by a twenty horse power engine. An elevator and warehouse of this kind will fill a long felt want in this, the Paradise valley, and will enable the farmers to sell and ship their grain in bulk as well as store it. This, then, will at least add five cents to the bushel for the value of wheat, besides saving purchasing so many sacks. The company will be stocked at \$25,000, with shares at \$25 each. It is to be known as the Moscow Elevator and Warehouse Company. It was gratifying to see the large attendance and interest which all took in this meeting. Hon. W. J. McConnell, Hon. W. S. Taylor, Messrs. Chas. and John Moore, and scores of other well-known residents of this section are among the incorporators. The object of the company will be to buy and handle grain in Idaho and Washington Territories with their head office at Moscow."

Elevator and Grain News.

Bath, Dak., is to have another elevator.

J. Campbell has sold his elevator at Minneapolis, Kan.

Gill & Co., grain dealers at Pekin, Ill., have sold out. Darlingford, Southern Manitoba, will soon have an elevator.

Davis & Cofield are building a new elevator at Duluth, Minn.

The Ogilvie Milling Co. are about to erect an elevator at Virden, Manitoba.

Whitney, Wiswell & Tull will build a 30,000 bushel elevator at Wadena, Minn.

Jaeggh & Schupach succeed the Columbus Lumber & Grain Co. at Columbus, Neb.

Messrs. Wright & Tucker, grain dealers at Taylor, Tex., have dissolved partnership.

Andrew Bros., of Brooklyn, Wis., are contemplating making repairs in their elevator.

Richie & Stevens succeed Richie & Beardsley in the grain business at Muscatine, Iowa.

West, Breed & Co., grain brokers at Pittsburgh, Pa., are succeeded by Joseph A. West & Co.

H. Clausen & Bro., of Fox Lake, Wis., contemplate adding new improvements to their elevator.

The new elevator soon to be erected in Burlington, Iowa, will have a capacity of 800,000 bushels.

Shultz, Roth, Kimmel & Co., grain dealers at Cambridge City, Ind., have dissolved partnership.

Wheat is rapidly accumulating at Stockton, Cal., and the quality is much better than was expected.

An elevator is wanted at Oak River, Manitoba. A correspondent at that place says it would pay well.

Weeks, Loring & Co., grain commission merchants at Minneapolis, Minn., have dissolved partnership.

Baker & Schultz, grain dealers at Fortville, Ind., have dissolved partnership. Hagan & Baker succeed.

L. J. Fletcher, Lake City, Minn., is increasing his storage capacity, and adding cleaning machinery.

Finch & Co., grain and produce dealers at Baltimore, Md., have dissolved. G. R. French, Jr., continues.

E. A. Abbott, of Marshalltown, Iowa, is overhauling his elevator at Zeating, Iowa, increasing the capacity, etc.

Walker & Tilton, grain commission merchants of this city, have dissolved partnership. John Walker continues.

Reutti & Mason, Hamilton, Ohio, malsters and grain men, are contemplating making changes in machinery, etc.

Radinger & McIntyre is now the style of the Chicago grain commission firm known in the past as Radinger & Co.

A. B. Cleveland, Cape Vincent, N. Y., is putting in a new engine made by the Paige Mfg. Co., Painesville, Ohio.

Capt. McMillan's elevator at Winnipeg, Manitoba, the lower timbers of which gave way last April, has been repaired.

C. E. Gill, Villard, Pope Co., Minn., is increasing the capacity of his elevator and putting in additional cleaning machinery.

Sauk Center, Minn., is to have an elevator of not less than 40,000-bushels capacity. It will be built by Pillsbury & Hulbert.

P. Bickelhaupt, of Randolph, Wis., is putting in new cleaning machinery in his elevator, and making extensive repairs.

A. J. Sawyer, Duluth, Minn., is placing machinery in his new elevators this year from the Paige Mfg. Co. of Painesville, Ohio.

Charles Meyer, a grain buyer of Ellwood, Iowa, has lost his own capital and \$3,000 belonging to friends, by toying with the ticker.

Bump & Gray, of Janesville, Wis., grain dealers, are getting ready to handle the largest crop of barley they have had for years.

Miller & Kirby, grain dealers at Auburn, N. Y., are increasing the capacity of their elevator and malt house at Weedsport, N. Y.

G. H. Richardson, grain dealer and banker at Belmond, Iowa, is overhauling his elevator and adding additional cleaning machinery.

Mr. Hulburt, of Moorhead, Minn., has located five elevators on the line of the Moorhead Northern, and will build three at once.

The Hudnuts have bought the elevator at Green Valley, Ill. Will Hanford, who has had charge of the elevator for years, continues there.

R. A. McGowen & Co. have sold their elevator at Indianola, Iowa, to other parties who have converted it into a fruit canning factory.

Jacob Weschler, of Erie, Pa., is building a new addition to his malt house containing every improvement. His capacity is 150,000 bushels.

Kellogg, Lange & Miller are overhauling their elevator at Minneapolis, Minn., increasing their capacity and putting in new machinery.

The Massac County Journal says: A gentleman who has traveled extensively in Southern Illinois, and who is an old corn buyer, expresses the opinion that there

was never a better prospect for corn than now, and that with reasonable rains the yield will doubtless exceed that of any crop for many years past.

Capt. D. R. Sparks of the "National Mills," Alton, Ill., has purchased the Chase Elevator at Carrollton, Ill. It has a capacity of 40,000 bushels.

Carrington & Casey, grain commission merchants at Toledo, Ohio, and St. Louis, Mo., have dissolved partnership. Carrington & Co. succeed.

Cotton, Duff & Co., Nebraska City, Neb., are contemplating putting in additional machinery to increase their capacity for handling grain.

The Great Western Mfg. Co. of Leavenworth, Kan., are building an elevator of 5,000-bushels capacity for Charters & Miller at Hollenberg, Kan.

The Paige Mfg. Co. of Painesville, Ohio, have a contract for furnishing grain elevators with engines, boilers, etc., at Colfax, Hope, and Erie, Dak.

J. F. Cargill, Wahpeton, Dak., has placed an order with the Paige Mfg. Co. of Painesville, Ohio, for three engines and boilers for his elevators.

N. O. Clark & Co., of Janesville, Wis., have added 10,000 bushel capacity to their elevator by raising one of its wings and putting in additional bins.

The Hoopston Grain Association of Hoopston, Vermillion Co., Ill., has been licensed by the Secretary of State to do business. It has a capital stock of \$8,000.

J. F. Cargill, Wahpeton, Dak., is making extensive improvements in his line of elevators preparatory to taking care of the present crop, which is very promising.

Leet & Fritze, of Chicago, Ill., have recently enlarged their elevator at South Chicago, putting in new machinery, etc. The elevator has a capacity of 75,000 bushels.

Agard & Co. are putting a 40-H. P. Westinghouse Automatic Engine into their elevator at Rockford, Ill., furnished by the Westinghouse Machine Co., Pittsburgh, Pa.

The new grain inspector of Minneapolis, Mr. Kinsie Maxfield, assumed control of his office Aug. 1. Frank Stevens, J. A. C. Waller, and T. W. Peart are his assistants.

The new elevator at Point Douglass, Manitoba, is nearly completed. It is being built by the Ogilvie Milling Co. It will have a storage capacity of about 200,000 bushels.

T. D. Seefeld is building an addition to his elevator at St. Charles, Minn., and Louis Schnell has raised the roof of the lowest part of his elevator to the height of the main part.

Superintendent Egan is at Port Arthur, Manitoba, locating the site of the proposed new docks and elevator at that point. It is expected that the expenditure will be about \$200,000.

E. B. Parsons Malting Co. of Rochester, N. Y., are overhauling their house thus increasing their capacity, and adding new machinery, etc., also their malt house at Sodus Point, N. Y.

H. Moores and J. Richardson of Kingston, Ont., purpose erecting a grain elevator at Renfrew, Ont., as soon as connection is made with the village by the Kingston & Pembroke Railroad.

The Ogilvie Milling Co. of Winnipeg are making rapid progress with their elevators, but it will be well toward winter before all the work they have in contemplation will be completed.

Smith & Porter, Freeport, Ill., have nearly completed their new elevator at Ridott, Ill., in place of one recently burned, putting in all the late improvements, and will have it ready for the new crop.

The Reno County Farmers Co-operative Association are building a new elevator at Hutchinson, Kan., nearly completed, which is intended to enable farmers to store grain independent of the market.

Hall & Willey, Sedgwick, Kan., grain dealers, have ordered additional machinery of the Great Western Mfg. Co., Leavenworth, Kan., with the view of materially increasing the capacity of their elevator.

The Great Western Mfg. Co. of Leavenworth, Kan., are building an elevator of 5,000-bushels capacity for A. Gilbert, Bennington, Kan., also one of 10,000-bushels capacity for L. C. Garrett of the same place.

P. M. Brown of Mill Bridge, N. C., is building a new flouring mill. The power will be furnished by a 50-H. P. Westinghouse Automatic Engine, furnished by the Westinghouse Machine Co., Pittsburgh, Pa.

John W. Galbraith is putting steam power into his roller mill at Dadeville, Mo. He has contracted for a 50-H. P. Westinghouse Automatic Engine, furnished by the Westinghouse Machine Co. of Pittsburgh, Pa.

W. C. Leistikow, a miller of Grafton, Dak., is building an elevator of 60,000 bushels capacity. This, in connection with a storehouse which he is building adjacent to his mill, will give him a storage capacity of 80,000 bushels of wheat.

F. W. Woodward, a farmer of Marshall county, Minn., is building a 40,000-bushel commercial elevator at Warren, Minn. Warren already possesses a 30,000-bushel elevator, and this new enterprise indicates that a large amount of grain is expected from this year's crops.

Messrs. McCally & Son of Walla Walla, Wash. Ter., are building a new warehouse near their present mill which is being rapidly completed. The structure is to be 40x200 feet, the sills and girders being 4x14 inches, having a square frontage. Rustic will be used in finishing, and the building will be first-class in everything,

and substantial. This with the one recently finished, will form an L near the mill. A side track from the railroad passes in front of the building. The work is under charge of contractor C. L. Robinson.

Strickland & Baker, grain and general merchandise at Browntown, McLeod county, Minn., have made an assignment for the benefit of their creditors. The extent of their liabilities is not known. The assets, including the individual property of the two members of the firm, are estimated at \$10,000 to 20,000.

J. B. Canterbury, La Crosse, Wis., is building, at Jefferson Junction, Wis., two and one-half miles from Jefferson City, on the C. & N.W. Railroad, an addition to his elevator, 40x50 feet, with sixteen bins in the new part for wheat. The entire elevator will have a capacity of 75,000 bushels.

B. L. Harding will erect a huge elevator in Des Moines, to be 114 feet long, 60 feet wide, and 93 feet high. It will have a capacity of 500,000 bushels of grain, and will cost \$50,000. All the railroads will either have tracks to it or will make arrangements to pass over the other tracks. The structure will be completed within sixty days.

Work is progressing very rapidly on the new elevator of the Baltimore & Ohio Railroad, corner of Howard and Hamburg streets, Baltimore. One hundred and fifty men are now at work on this building, which it is expected will be completed about the 1st of October. This building is to be 130 feet high, and 168 feet long by 74 wide. An 80-horse power engine and boiler, made at the company's shops, Mount Clare, is now being placed in position.

Mr. L. C. Barnett, builder of round grain elevators, Minneapolis, Minn., is building the circular elevators for the Lenham Elevator Co. at Sanborn and Coopers-town, Dak., which are to be completed Aug. 15. Mr. Barnett has also just completed a 30,000-bushel elevator for James Dunlap, Elgin, Dak., and has besides taken the contract to build a 30,000-bushel elevator for the Dwight Land & Farm Co. at Ellsworth, Dak., which makes the second circular elevator for this firm, they having built a 60,000-bushel elevator there three years ago.

The El Paso Times says: At the Southern Pacific Railroad depot two hundred car-loads of the California wheat crop arrived yesterday, and the depot presented all day a lively scene, as the golden harvest was being rapidly sent over the Galveston, Harrisburg and San Antonio line for shipment to Liverpool. The special freight trains bringing the first installment of a shipment which will be passing through here daily with lightning rapidity, consisted of fifty cars, each drawn by two locomotives, and more engines, it is said, will have to be sent here to assist in the handling of this vast freight.

The Northern Pacific Railroad Company will soon commence the construction of a large grain elevator at Albina, Wash. Ty. Its capacity will be 45,000 tons. The cost of the building and machinery will be \$800,000. Mr. George B. Mallory, a civil engineer who was out here some time since and traveled over the line of the company's road with a view of judging at what points it would be best to locate elevators, is now in San Francisco on his way here to superintend the work of constructing the elevator. He states that grain elevators will also be erected at Walla Walla and on Puget Sound.

Respecting the Lenham Elevators the Sanborn, Dak., Enterprise says: Mr. Tucker, the superintendent of construction, has a force of masons and carpenters at work and is moving as fast as possible. More masons are wanted, however, and Mr. Davis, from whom we learned the accompanying facts, left for Jamestown yesterday to try and find some there. The building is what is known as the round elevator, and is forty-five feet in diameter. The machinery includes a 15-horse power engine and 20-horse power boiler, a Barnard & Leas Separator; shipping scales, which weigh the grain shipped as well as that received, are a new feature. The other machines will be of the latest improved patterns. The elevator at Coopers-town, work on which has commenced, is of the same dimensions and capacity.

The Enterprise of Coon Rapids, Iowa, says: The new elevator for Coon Rapids, which has been under contemplation for some time, has finally got started, and work is now being pushed forward in a lively manner. Forty thousand feet of lumber have arrived on the ground, and the contractors promise to have it completed ready to receive grain inside of two weeks. The new building will be 24x30 feet, and its capacity will be ten thousand bushels. It is claimed for it by those familiar with elevators, who have seen the diagram of this one that it will be the most conveniently arranged elevator along the Milwaukee road. All the space will be utilized, and the grain dumps will be but two feet above the ground so that farmers will not be compelled to pass over an elevated drive-way in order to dispose of their grain, which is so often a source of annoyance to those who have fiery and skittish horses, and otherwise inconvenient. E. Dale, the proprietor, one of the enterprising farmers living near this city, is a gentleman whom we believe will conduct the business in a manner satisfactory to those who have grain to sell, and will prove a valuable addition to the business men of Coon Rapids.

Messrs. Chas. Kaestner & Co. of Chicago, Ill., have recently made sales to parties as follows: J. M. Hutches, Marble Rock, Iowa, elevator and machinery; Geo. A. Weiss & Co. of Chicago, Ill., the contract for all the machinery and millwright work for their new 500,000-bushel elevator; M. Schoonemaker of Reynolds, Ill., Kaestner Grist and Feed Mill, elevator and machinery; Williams & Co. of Detroit, Mich., elevator and machinery; Vorce & Blee, Springfield, Ohio, elevator and ma-

chinery; Seaton & Lea, Atchison, Kan., two 16-inch and two 24-inch Kaestner Mills; Meridian Mill Co., Meridian, Wis., a corn sheller; J. J. Clark & Son, Elgin, Ill., shafting, pulleys, hangers and gearing; C. H. Comstock, Ashkum, Ill., a 16-inch Kaestner Mill, elevators, etc.; Braer & Van Dugue, Fall River, Wis., a 20-inch Kaestner Mill, elevator, etc.; Geo. De Camp, Ladoga, Ill., a 24-inch Kaestner Mill, elevator and machinery; Jos. Bosch & Co., a 20-inch Kaestner Mill and elevators; Chisholm Bros. & Gunn, Minneapolis, Minn., two 24-inch Kaestner Mills; R. G. Schuler & Co. of Minneapolis, Minn., a 20-inch Kaestner Mill; L. M. Rumsey Mfg. Co., St. Louis, Mo., a 20-inch and a 16-inch Kaestner Mill.

CENSUS REPORT ON UNITED STATES CEREALS.

The special census report of Prof. W. H. Brewer, the proof sheets of which have just been received by the superintendent, is regarded as one of the most valuable documents ever issued by the Government; it will contain a full and detailed history of American agriculture in all its departments, and a discussion of the various questions pertaining to its development and improvement. The following facts have been obtained from this report: The total production of the six principal cereals in the United States during the census year amounted to 2,698,000,000 bushels, an average of 53.8 bushels per capita, and an increase of 94 per cent. since 1870. While this is due in part to the cultivation of new lands in the West and Northwest, it is much more largely due to the gain in the farming regions already occupied in 1870, and on lands ranging in value from \$30 per acre upward. The per capita consumption of grain in this country is a little over forty bushels, while in Europe it is less than eighteen bushels. In 1880 the first three leading states in cereal production were Illinois, producing 16.48; Iowa, 13.44, and Missouri, 9.22 per cent. of the total. These states, including Ohio and Indiana, produce over 52 per cent. of all our grain. The most of our grain is produced in regions of moderate-sized farms, where mixed farming is carried on. The "Prairie" region produces 37 per cent. of the whole grain crop, and the "Central" follows. Of the drainage basins, the Mississippi of course leads all the rest, in which over 82 per cent. of the corn crop is produced. The elevation of between 500 and 1,000 feet above the level of the sea yields over 52 per cent. of the total product. The next elevation in value is between 1,000 and 1,500 feet; while between 100 and 1,500 feet elevation, over 90 per cent. of the total grain product of the country is grown. About three-fourths of the total product is grown in regions where the average midwinter temperature is below the freezing point; while in reference to the midsummer temperature 47 per cent. is produced where this is between 75° and 80° Fahr., and 86 per cent. where it is between 70° and 80° Fahr. In reference to the depth of rainfall of the six growing months, 61 per cent. of our grain is produced when this is between 20 and 25 inches, and 27 per cent. when it is between 15 and 30 inches. According to this report, climate is a more important factor in the profitable cultivation of the cereals than the fertility of the soil. In all the larger grain-growing states, except Pennsylvania, more than four-fifths of the grain farms are cultivated by their owners; and it is highly probable that not less than 80 per cent., and probably more than 85 per cent. of the total grain produced in the United States, year after year, is grown upon farms that are managed and occupied by their owners.

THE ILLINOIS STATE WEIGHMASTER.

The State Board of Railway and Warehouse Commissioners closed their session on July 29 and adjourned. The salaries of the State Weighmaster and first assistant were fixed at \$2,500 each. The following appointments were made of assistants and employees in the Weighing Department subject to the Weighmaster's call: Chief clerk, Charles Mooney; clerks and messengers, Martin A. Ford and George Le Bau; assistant weighmasters, S. W. Nelson, W. D. Carroll, James MacEnery, J. A. Short, J. T. Hooper, H. W. Schmidt, M. S. Mitchell, A. P. Sharp, W. W. Koontz, P. McGreery, F. C. Shaw, James Jordan, H. W. Lewis, S. J. McTiernan, C. W. De Groot, S. E. Reed, G. L. Parker, Frank Evans, L. W. Medbury, William Cruikshank, H. P. Woolaver, S. B. Reed, P. Fremegen, W. J. Reidy, B. L. P. Bell, F. L. Gould, A. D. Merritt, George Cochran, — Sterling, J. W. Foster, B. B. Longenecker, J. McMillan, Daniel Gunn, Edward Hitchcock, and George Phar.

The new officers took control Aug. 1, and the details as to form of certificates, etc., will be arranged by the State Weighmaster and Chairman of the Commission. The claim of Nash & Wright for \$303.74 for alleged misinspection was refused. The Board in their appointments selected the present first assistant to retain his place, and the first sixteen assistants from those formerly employed.

THE EFFECT OF DEALING.—"How old are you, Jacob?" asked the doctor of an aged Austin Israelite, whom he had been called to attend in a professional capacity, and who is a broker whose mind runs on the fluctuations of the market.

"I vash seventy-two years old," was the reply.

"You may live to be eighty years of age."

"I vash afraid not, Misher Doctor," replied Jacob.

"Vy should the Lord vant to take me at eighty, when he can take me now at seventy-two?"

Canals and Marine.

Gen. Stone, an expert, gives a very favorable opinion as to the great value to the commercial world of the proposed ship canal across the northern end of Florida, and its practicability. The enterprise is a great one, but in this respect belongs to those of the present day.

Lieut.-Col. Wm. E. Merritt of the U. S. Engineer Corps, has submitted his estimate for work on the Louisville and Portland Canal for the coming fiscal year; the total amount is \$77,140. Of this, \$6,300 are for general repairs; \$22,000 for reconstruction of middle sill of new locks, and \$5,000 for contingencies. The estimate for the fiscal year of 1882 was \$40,220.20. The Colonel thinks the contingent fund should necessarily be liberal.

It has been known for a long time that there were dangerous rocks in the Welland Canal, which have been the cause of great damage to many vessels. Capt. McIlwain of St. Catharines has, after seven years, obtained payment for his vessel, the St. Andrew, which, loaded with grain, struck on an obstruction in the canal and sunk. She was raised, and last year sunk in Lake Erie with 14,000 bushels of grain. The Government arbitrators at first refused to grant his claim. By his personal exertions, however, at Ottawa he obtained a second hearing, and was awarded \$3,000 with interest. This decision will open the way to the payment of other claims not yet settled.

The *American Grocer* speaks with pride of the benefits conferred by the work of the New York free canals. A large increase has taken place in the canal traffic this last year, and the improved promptitude and ease of handling grain and the diminished cost are apparent. The railroads feel the influence and are more ready to consult the interests of shippers. The port of New York has felt the beneficial effect in her increase of trade, when that of competing cities governed by railroad pools was falling away. "So long," says our cotemporary, "as our free canal system is upheld and administered fairly, so long will New York have a strong hold on the export grain trade, and when other places come in competition, they must have equal advantages."

The *British Trade Journal* calls the attention of the English public to the fact that while the canal facilities are inestimable in the value they might be to the traffic of that country, they are steadily falling into decay, and their place is being taken by railways. The reasons assigned are that these canals were made to suit horse-hauling, which is necessarily very slow. Several years ago the canal companies tried steam towage and failed, because the canals were not suited to the use of this power. If they were increased in width and depth, and their locks improved, the speed of the boats might be easily increased to seven or eight miles an hour, and a much cheaper and safer method of moving heavy goods thus be provided.

It is stated that the canal which will connect Lake Ontario with the Bay of Quinte, is to be dug to lake and bay levels with the exception of a few places where from local causes the levels are lower. Italians are at work wheeling out muck from Dead Creek marsh, where teams could not work, owing to the softness of the ground. Somewhere in the neighborhood of eighty teams and 225 or 250 men are employed. The steam pumps have had to be kept going pretty busy this season so far on account of the very wet weather. The dredge in Presque Isle Bay has nearly or quite completed cutting out a foundation for the crib work, which will extend for 1,000 feet from the pier on both sides of the canal entrance. The timber and stone for these cribs are nearly on the spot.

At a recent meeting of the New York Railroad Commissioners the following resolution was introduced:

Resolved, That the system partially disclosed to this board by reports of railroads of compelling the shippers, in order to get a reduction from the regular tariff rates, to sign a contract not to ship dry goods and other merchandise by canal during the season of navigation, is wrong in principle and against the interests of the people of the state, and should be discontinued by the railroads.

This was laid over for consideration at a future meeting. The importance of this matter to the people in the availability of the canal route during the season of navigation, is evident. The railroads may endeavor to make it appear that all-the-year shipping by them will be less expensive, but their argument will probably be more plausible than true. This will lead to a thorough investigation into the actual costs of railroad transportation. Charles Francis Adams, when a Railroad Commissioner, is reported to have said that "railroad men were the greatest liars he had ever met."

James B. Quinn, U. S. Captain of Engineers, made his annual report on July 27, of the work done the last year in improving the Missouri River from Sioux City, Iowa, to Fort Benton, Mont., and the Yellowstone River in Dakota and Montana. On the former, the improvements were limited to the portion above Bismarck. To secure a sufficiently deep and safe channel obstacles have been removed, and wing-dams constructed. The work has proved satisfactory and its permanency is assured by the character of the river bed; but below the present work "permanency cannot be expected," and light temporary works are recommended. The difficulty of obtaining labor and supplies has been great. Capt. Quinn advises that ample funds be appropriated to the improvement of the Missouri, which is navigable for 2,000 miles between Sioux City and Fort Benton. He says 32,000,000 pounds of freight were shipped last year by steamboat above Bismarck. The report advises that a system should be adopted in the lower river of "following up the channel little by little and holding all that can be gained." Dur-

ing the last year \$37,919 were expended and \$395,000 are asked for to continue the work. On the Yellowstone improvements have been limited to the vicinity of Glendive, Mont., and consisted in building dams to close chutes, and confine the water to the main channel. A material deepening of the water on difficult shoals has resulted. Similar work below, it is said, would give a short river haul to Fort Buford, instead of a 300-mile upstream haul, as at present. During last year, \$10,886 were expended, and \$100,000, it is believed, can be profitably laid out during the next.

The Quebec Board of Trade are opposing the statement by Montreal that the deepening of the channel between the two cities to a depth of twenty-seven feet will benefit the whole country, and that its expense should be met by the Dominion. The Quebec Board assert that this is a measure for the benefit of Montreal to the detriment of other ports, and she should pay the cost if it is done. The *Montreal Gazette* says, that 92 per cent of the exports via the St. Lawrence are stopped there and scouts the idea of self-interest, or that this improvement will interfere with the shipments to and from Quebec when her harbor facilities are enlarged. In reply it is said that as the canals are an essential part of the waterway from the interior to the seaboard, and as the present depth of the channel in dispute is now ample for any vessels that can pass through the former, it does not appear how this proposed improvement will benefit the trade of interior ports as Toronto, etc., either in convenience or expense.

Fires, Casualties, Etc.

Dull, Edmunds, Coulson & Co.'s elevator at Cokato Minn., was burned July 13. Loss about \$5,000.

The grain elevator at Waterloo, Iowa, was struck by lightning recently and destroyed, causing a loss of \$10,000.

Col. J. B. Culver, a commission merchant of Duluth, Minn., died suddenly in Buffalo, N. Y., while being shaved.

The warehouse of the Nashville Warehouse & Elevator Co. at Nashville, Tenn., was damaged by water recently; insured.

W. J. Newton, agent at Grand Forks, Dak., for the grain firm of Sterrett, Hill & Childs of St. Paul, Minn., committed suicide two weeks since by taking strychnine.

During the late storm in Minnesota the roof was blown off Pillsbury & Hulbert's warehouse at Sabin, Minn., and the building itself lifted from its foundations and landed on the railway track.

The grain elevator at Chebanse, Ill., belonging to Lowe Bros. & Co., commission men of Chicago, was destroyed by an incendiary fire on Wednesday night, July 25. The loss was \$7,000; partially insured.

At Stockton, Cal., on July 26, Frank Stewart, a prominent grain merchant of that place, had the upper portion of his left thigh terribly crushed by being caught between the bumpers of two loaded cars. He died the following day.

Maxon's cribs, containing forty-five bales of broom-corn and several hundred bushels of Indian corn, and a small dwelling were burned Sunday night, July 22, in Arcola, Douglas county, Ill. Loss, \$4,000; the broom-corn was insured.

Last month we recorded the burning of Bassett, Hunting & Co.'s elevator at McGregor, Iowa. We regret that a second fire on Aug. 1 destroyed their offices, fixtures and produce, amounting to \$6,500. They lost in addition, nearly all of their valuable papers.

The elevator at St. Charles, Iowa, owned by Turner & Bellany, was struck by lightning on the morning of July 20, and was destroyed by the resulting fire, together with the firm's office and warehouse. The elevator contained several thousand bushels of grain and the total loss amounted to about \$10,000, with \$6,000 insurance.

During the great storm of July 21, a grain elevator was overturned at Elgin, Minn. There were two grain elevators and a hoisting apparatus, owned by Bryant Bros. & Johnson. These buildings were built of oak timbers and filled with grain, but the force was so great that it whirled one around off the foundation, and took the roof and hoisting apparatus and landed them in sections on the railroad track. The largest of the elevators on the south side resisted the force, and was but slightly damaged; it seemed also to have sheltered the railroad depot, as but a small corner of that was taken off.

At Cherokee, Iowa, Fred Henderson, son of James Henderson, aged ten years, with his cousin, Charlie Snell, aged twelve, were playing in a wheat bin in Hoag's elevator, when Mr. Henderson, father of one of the boys, pulled the slide, and the boys were sucked down with the falling wheat. The bin contained from 800 to 1,000 bushels, and the greater part of this mass closed over the little fellows, suffocating them almost instantly. As they felt themselves going they cried out and were heard, but it was too late, and those at the opening were horrified to see a leg of one of the boys in the mouth of the slide.

Mr. Alex. E. Orr of the New York Produce Exchange was offered the comptrollership of New York City by Mayor Edson, but declined the honor.

MAKING BREAD DEAR.

BY HENRY D. LLOYD IN "NORTH AMERICAN REVIEW."

While only one bushel in seven of the wheat crop of the United States is received by the Produce Exchange of New York, its traders buy and sell two for every one that comes out of the ground. When the cotton plantations of the South yielded less than 6,000,000 bales, the crop on the New York Cotton Exchange was more than 32,000,000. Oil wells are uncertain, but the flow on the Petroleum Exchanges of New York, Bradford, and Oil City never hesitates. Pennsylvania does well to run 24,000,000 of barrels in a year, but New York City will do as much in two small rooms in one week, and the Petroleum Exchanges sold altogether last year 2,000,000,000 barrels. When the Chicago Board of Trade was founded, its members were required to record their transactions. The dance of speculation has nowadays grown to be so rapid that no count is kept of the steps. The Board was lately reported to have turned over as much wheat in one day as the whole State of Illinois harvests in a twelvemonth. Its speculative hogs outnumber two to one the live hogs in the United States, and it is safe to say that the Board raises five bushels of grain to every one that is produced by the farmers of the West. Securities have become as staple an article of production with us as wheat, cotton, oil, or hogs. One million dollars' worth a day of new stocks and bonds is needed in prosperous years to supply the demands of the New York Stock Exchange, and its annual transactions are nearly thrice the taxable valuation of all the personal property in the United States.

One of the things that would be new to Solomon, if he lived to-day, is the part played by the modern Exchange in the distribution of the products of labor, and the redistribution of wealth. The honest industry that builds up our greatest fortunes is raising wheat and pork on the Chicago Board of Trade, mining on the San Francisco Stock Exchange, building railroads in Wall street, sinking oil wells in William street, and picking cotton in Hanover Square. While the text-books of the science of exchange are describing in infantile prattle the imaginary trade of prehistoric trout for pre-Adamite venison between the "first hunter" and the "first fisherman," the industry of the cotton plantation, the oil fields, and the farm, is being overlaid by an apparatus of Exchanges which will prove an extremely interesting study to the Ricardo of, say, the twenty-fifth century. These Exchanges are the creameries of the world of labor. The prices of the speculative wheat and the spectral hog of the Board fix those of the real wheat and the actual hog of the field. The negro planter of Georgia who raises his bale and a half must sell it for what the Cotton Exchange says it is worth. The man who works in the ground must take the price fixed for him by the man who works in the air. No one can understand the "corner" who does not comprehend the development and reach of the Exchanges of our time.

The manufacture of prices, like other modern industries, is being concentrated into vast establishments, and these are passing under the rule of bosses and syndicates. The markets, like political parties, are run by the machine. The people are losing the power of making prices as well as nominations. The "Free Breakfast Table" pays tribute to some clique, whether railroad, pool, trades-union, match monopoly, coal combination, pottery tariff infant, or Board of Trade corner, on pretty much everything upon it. The coffee market of the country has lately gone out of the region of unorganized supply and demand into the hands of a Coffee Exchange, with all the modern improvements for speculation. A price factory to make the quotations of butter and cheese has just been established in New York. It deals in brokers' eggs as well as hens' eggs, and has all the approved facilities to enable it to count and sell the chickens that are not yet hatched out of eggs that are not yet laid.

The concentration of news, capital, and middle-men, in a focus; steam, electricity, and credit; the specially modern means of finding out the "statistical situation;" the development of the corporation; the multiplication of huge private fortunes and their union in syndicates; and the lupine standard of business morality, make the modern market a thing new in development if not in kind. These Exchanges are cosmopolitan legislatures. Their enactments are prices, and their jurisdiction extends beyond that of Congress, Parliament, the Assembly, and the Reichstag. They are more than negative registers of prices determined by a conflux of forces external to them. Under the manipulation of cliques they have become positive agencies of mighty influence, and are the scenes of operations that menace the lives and happiness of nations. The "strong man" now builds corners instead of castles, and collects tribute at the end of a telegraph wire instead of a chain stretched across the Rhine. Money, knowledge, and energy are nearing the boundaries of exploration, and are turning back to monopolize the provinces. The whole world is platted. Such appliances as ours for exchange have never co-existed before, in the history of business. The criminal rich,—those who appropriate the labor of others in one age by brute strength, and in another by brute wealth,—who are to-day degrading competition into a rivalry of adulteration, are seizing upon them for speculative purposes. The control of the machinery of the Exchanges is the control of prices, and the control of prices is the control of property. In markets where the cotton crop, and the wheat crop, and the pork product of the whole country can be turned over half a dozen or a dozen times in a year, it is an easy thing for a combination to get hold of the marketable surplus and dictate its prices.

The "fittest" in the trade world are those who have learned the magic art of the manufacture of prices, and the Exchanges are shifting the property of smaller men into their hands.

The greatest of these price factories is the Chicago Board of Trade. Thirty years ago, its thirty-eight members were scouring the country back of them to persuade the farmers to send their stuff to Chicago for sale. Cheese, crackers, and ale were spread out in the Board room to induce the members to attend, but for days in succession the minutes of attendance read "none." Last year, the Board received and paid for, in cash, \$382,000,000 worth of farm produce; and the total of its transactions was not less than \$3,000,000,000. It has become not only the chief of the food markets, but "the greatest speculative market in the world," as an authority on speculation testified last winter before the New York Legislature. It is the only market to which all the world goes to trade. Orders to buy and sell come to it daily from London, Liverpool, Glasgow, Edinburgh, Dublin, Cork, Bordeaux, Marseilles, Zurich, Havre, Antwerp, Amsterdam, Berlin, Hamburg.

No other farmer has such a market as this which mobilizes and cashes the crops of the Mississippi Valley. Its scores of railroads fetch and carry. Its banks, stretching from the Zuyder Zee to the Yellowstone, bring the capital of the Bank of England and of the Hopes of Amsterdam to meet the farmer when he drives up to the country station with a wagon-load of grain to sell. Its telegraph wires inform him of the prices, the weather, the supply and demand of the world. Its every opinion of value is substantiated by cash. Its warehouses will hold two days' rations for every man, woman and child in Europe and America. Packing-houses that can, singly, kill ten thousand hogs a day in summer, and twenty thousand a day in winter, are there to receive all the live stock that the prairies may forward. A cargo of grain lately sold in Liverpool on Chicago account had to be disposed of on six months' time. Chicago, whether in harvest-time or midwinter, will any day buy all that any one may wish to sell, and sell all that any one may wish to buy. Liverpool is, in comparison, an awkward country market, where every consignment of grain must be handled and sold as a separate parcel. But here the state inspects all the grain that arrives at Chicago, and gives a ticket of quantity and quality which is a negotiable security, and passes into commerce to be sold and bought, and borrowed upon, while the wheat itself is run with more of the same kind into the graded bins of the elevator.

Farmers and country grain buyers who want to take advantage of high prices, but are too busy to ship their wheat to market, can telegraph a broker on the Board to sell for future delivery. The miller, if wheat looks cheap, can buy for future delivery. These contracts are "futures." It is by their agency alone that the strain on the banks for money to move the crops is so distributed that we do not have a commercial crisis every fall. The fellah of Egypt and the slav of Bulgaria habitually sell their growing crops while green in the field. The distance between their misery, at the mercy of their own ignorance and the greed of the usurer, and the affluence of our own farmer is as good a measure as any of the unapproachable superiority of the market which fate has given to the American farmer alone of all the tillers of the soil, but which the greed of the cornering syndicates threatens to destroy.

Wheat Adam Smith declares to be the least liable of all commodities to be engrossed "by the power of a few great capitals which buy it all up," because "its owners can never be collected in one place." But that, impossible once, is easily done now by the Board of Trade. By the perfection of its apparatus and the magnitude of its transactions, it is now possible for a clique, almost in one day, to obtain speculative possession of the surplus of a crop, and to insist that it all be delivered to them within an impossible time under a ruinous penalty, or to put it out of reach, and then demand an impossible delivery under a ruinous penalty. Every "future" bushel sold must be made good by the delivery of a real bushel when the buyer calls for it, and every purchaser of a "future" bushel must take and pay for a real bushel when the seller brings it to him. In olden times, when it was a prison offense all over Europe to buy wheat to sell again, it was the buyer who was mobbed and jailed. Nowadays, by a strange reversal of public sentiment, it is the seller who is treated with violence—that is, the "future" seller, the man who, in order to realize present prices, sells the wheat that he is holding in the country awaiting shipment, or which he expects to receive in the regular course of trade. It is obvious that, in the debate on prices on the Boards and Exchanges, both sides must be represented. There cannot be cash buyers without cash sellers; there cannot be buyers of "futures" without sellers of "futures;" there cannot be prices made, stocks accumulated, and crops moved without both, and without all this there could be no Board of Trade. Cornering commodities is only half the modern corner. The better half is cornering contracts. Most of the profit of corners is made up of the damages extorted in the shape of fictitious prices from the country shippers and from the traders on the Board, for not fulfilling contracts which the syndicates have made with them, intending to render them impossible of performance. And every such fictitious price so made within the Board is a real price to the consumers in the world beyond the Board.

The market is in these days no longer the mystery of the few; it is the mystery of the many. After giving men crop reports, market advices, banks, telegraphs, and brokers, it is too late to tell them not to try to use them for their legitimate profit. If the buyer helps the farmer, the seller helps the consumer, and in the world

commerce the consumer is just as good a man as the producer. The "future" seller is the offspring of the modern facilities for business. It is only in a highly organized market, with its supplies of commodities steadily flowing to him, that he could live. A highly organized market could not exist without him. No aspect of the corner is more ominous than that it aims at crippling the seller as well as the bread-eater, and with them the market in which they are as important personages as the farmer.

[TO BE CONTINUED.]

Items from Abroad.

Four large warehouses, containing grain, oil and flax, were burned at Hull, England, July 16. Loss, £100,000.

The *Daily Telegraph* of London, Eng., says that the agricultural prospects of the year are bright and cheering, far better than for some years past.

The acreage under wheat in England and France is fifteen per cent. less this year than last. The yield per acre is expected to be equal to last season.

The Argentine Republic, South America, exported 1,700 tons of wheat and 107,000 tons of maize last year. The grain producing capacity of this country is increasing. Machinery is being rapidly introduced, but the great want at present is labor.

In the district of Canterbury, New Zealand, the wheat acreage in the season of 1883 was 249,163, yielding 6,359,992 bushels, against 237,015 acres, yielding 5,047,883 bushels in the 1882 season. In 1883 the average yield was 25.52 bushels, and in 1882 it was 21.29 bushels.

This is a description in *Le Genie Civil*, of July 1, of a floating grain elevator. The structure was made at Bordeaux and placed in the harbor to unload the vessels arriving with cargoes of grain. It contains apparatus for weighing, cleaning, and sacking the grain. From the ship's hold it can unload, weigh, clean, weigh again, put into sacks, and reload into trucks 150 tons of grain per hour. The elevator is mounted on a barge, which is propelled by a screw worked by a compound surface-condensing steam engine that furnishes the motive power for all of these operations.

Consul Sprague reports that several unusually large cargoes of Bombay hard wheat direct from India by steamers through the Suez Canal entered at Gibraltar. The greater portion of these importations have been transported to Spanish markets both by land and by sea. Further supplies are still arriving from the same quarter. The low cost of this description of wheat permits it to compete with Spanish descriptions, even with the import duty imposed upon it, as it forms an excellent substitute in times of scarcity. In the same report the Consul adds that the imports of flour at Gibraltar from Marseilles by steamer direct, is interfering with the trade in American breadstuffs.

SHIPPING PRODUCE.

Many of our readers are, no doubt, large shippers of produce, and the following suggestions taken from a New York paper may be found valuable by them.

If shippers of vegetables and produce could stand on our docks or at our freight depots for an hour some forenoon when freight handlers are unloading their trucks they would learn: (1) that all barrel heads should be securely nailed in; (2) that it is not wise to mark barrels on the head alone; (3) that initial marks and simple signs are liable to be duplicated. It frequently happens that barrel heads fall out, or from rough handling are knocked out. Then the cooper comes along, seizes the first head he can find and seals up the broken barrel. By good luck a head may find its way to the barrel from which it came, but the chances often are ten to one that it will not. Of course the end of the barrel first to break out is that from which the head has before been removed. This is the top and upon this a country shipper almost invariably places his mark. The consequence is as soon as the head falls out, the proof of his property is gone, and if he happens to be shipping choice potatoes, for example, some other person's mark is coopered into his barrel and he becomes the loser. The next scene is a bill rendered by his consignee for shortage of barrels against the transportation company, or a dispute upon how his mark was found with another shipper's potatoes, or whose potatoes these are having a different shipper's mark on both heads.

Shippers are legion, or else they will not learn from one experience to head up their barrels securely in the first place, and then to mark them distinctly, both upon the head and side of each barrel. By right the consignee's name should appear in full upon each package, and various shipping marks be discarded.

Forty barrels of new potatoes were recently consigned to an intimate acquaintance of ours marked F. H. Upon the same steamer came another brand marked F. & H. F. & H. took away a considerable portion of F. H.'s goods, leaving an inferior variety marked F. & H. in place of them. Add to this that the marked head in several instances dropped out and potatoes were lost, and you have our friend's experience—ten or fifteen dollars out of pocket, and an endless amount of vexation.

Tickets of membership to the New York Produce Exchange have been going up while those of the Stock Exchange have been declining. Tickets in the former have been selling for \$4,700.

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HARLEY B. MITCHELL, - - - Editor.

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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO'S INTEREST IN THE ERIE CANAL.

The value of the increased business done on the New York canals since they were made free from tolls is quite large, and its importance to Chicago in sustaining the interests of its grain market is very evident. Since the opening of the canals on May 8, somewhat later than usual, about 2,000,000 tons of freight have been carried by them, an increase of nearly 200,000 tons over the same period of last year. Of this there were of wheat, 6,134,700 bushels; of corn, 8,563,606, and of rye, 1,238,214 bushels. The average charge on the freight from Buffalo to New York has been about one-fourth of one cent per ton per mile, and on that coming from New York, one-eighth of one cent per ton per mile. This for Chicago means a permanent decrease on grain freights to the seaboard, a distance of 1,500 miles, during eight months of the year, and its necessary effect upon the railway transportation, keeping prices steady and protecting from the monopoly of pools and rings. For the remaining third of the year the immense storage facilities of this port, capable of unlimited increase, and the readiness and safety with which capital can here lend its aid to this important traffic, will prevent any exorbitant freight charges by rail, as the grain can easily be held for water transportation as a competing factor. This protection of the interests of producer and consumer gives to the grain dealers of Chicago advantages for a permanent hold upon the business that nothing but their own folly in speculation and corners can loosen. And with this important traffic the other elements of commerce are necessarily conjoined, and will equally respond to the same influences.

A WASHINGTON gentleman, who claims to have warned the country at the start against introducing the English sparrow, says it is now too late, that the sparrows have come to stay. They are granivorous and not eaters of worms and insects; are better fighters and will drive away the native songsters, and terrific breeders during the greater part of the year. While in the cities, he says, they are mainly now a nuisance, they will eventually become a pest to the farmers, and devour millions of dollars worth of food annually.

THE City Council of Winnipeg, Manitoba, offer exemption from taxation to parties erecting elevators within six months, as follows: An elevator of the capacity of 1,000,000 bushels for twenty years; an elevator of the capacity of 500,000 bushels for ten years; an elevator of the capacity of 250,000 bushels for seven years; the exemption to cover land, buildings, and machinery.

ELEVATORS IN THE NORTHWEST.

As we predicted, the present season is proving one of great and continuous activity in elevator building in the Northwest. In Minnesota and Dakota especially, a very large number of houses have been built and are in process of erection, while not a few have had their storage capacities increased to meet the requirements of the present crop. When we remember that half of the public land taken up the present year is in Dakota, we need not wonder that a shortage of elevator capacity is complained of in that state. It is true, a story comes from Milwaukee that twenty elevators on the Northern Pacific are to be closed up, but this is not believed. Northern Dakota has 4,000,000 bushels elevator capacity, but this is evidently deemed inadequate, judging from the activity displayed in building new elevators.

And in Manitoba, too, there has been, and is more or less activity in this same direction, as our news columns will show. Winnipeg aims to become another Chicago, and to this end is encouraging the building of large elevators to which the smaller elevators in outlying districts shall become tributary.

EXIT, AN OLD SLANDER.

In July a statement was published over the signature of S. H. McCrea, of this city, implying that Mr. W. H. Harper, as chief grain inspector, created a deficit of \$20,000 in his accounts. Mr. Harper in reply, has made the following statement, the facts of which are fully corroborated by the Railroad and Warehouse Commissioners, and the Attorney General of the state, in their reports for 1882. When Mr. Harper, under Gov. Beveridge, assumed control of the department on April 8, 1873, he found the treasury depleted, and a deficit to the amount of \$2,153.63. To meet this, the inspection fees were increased from 25 cents per car for inspecting into store, and 40 cents per 1,000 bushels for out inspection, respectively to 35 and 50 cents. The following March, these fees were reduced to their original amount. In July they were again reduced, and in November, 1874, the cash balance still being large, these fees were reduced to 15 cents and 25 cents respectively, these rates being 10 cents per car, and 10 cents per 1,000 bushels less than they had ever been, and they so continued to the close of Mr. Harper's term of service, April 8, 1875. At this time the balance on hand amounted to \$23,415.96, of which sum there had been deposited, by order of Gov. Beveridge, \$10,246.23 in the Cook County National Bank, which had failed, without assets. A demand being made on Mr. Harper for the full amount of balance, acting under the advice of his bondsmen and attorney, he declined making the payment unless the sum lost in bank, as above stated, was deducted. A suit was the result, but the matter was finally settled by the Commissioners accepting the deduction mentioned with some smaller amounts, under the advice of the Attorney General of the state; and the balance, with interest amounting to \$14,806.80 was at once paid over by Mr. Harper. In the reports above referred to, the Attorney General and the Commissioners admit that the position of Mr. Harper was correct, that he was justly entitled to the credits claimed, and that he voluntarily waived legal technicalities and made the payments as soon as the case was adjusted. This is a complete exoneration of Mr. Harper, and should put a stop to all such equivocal references, which are simply of the nature of slander.

MAJ. W. H. BENYARD, U. S. Engineer, in his report on the improvement of the Chicago harbor during the last fiscal year, states that the outer harbor has been dredged to a depth of 16 feet, over an area of 270 acres, with a depth varying from 10 to 19 feet. The remainder, 185 acres, will be reserved for piers and slips. Dredging operations, it is proposed, shall be continued in the outer harbor removing 118,000 cubic yards of material. Work will also be continued on the interior break water, and it is estimated that 3,400 feet of crib work will be completed by June 30, 1884, with a superstructure to the height of

3,000 feet. The amount of available funds is \$45,351.40; the amount required to complete the work, \$348,000; and the amount that can be profitably expended during the next fiscal year is \$230,000.

ANOTHER GRAND SCHEME.

Chicago, it seems, is not to hold alone the honor of originating grand schemes for the benefit of those of small means who are ambitious of engaging in speculation, and enjoying modes of making money by wit in place of work. The following advertisement has recently appeared in several papers:

THE PERPETUAL OC.—PERPETUAL OC SCRIP
Holders are making money; dividends every 35 days. Send \$1 for the great curiosity, or 7 cents postage for copy of paper, 7-7-21. A. E. GAGE, 305 Mulberry St., Rockford, Ill.

This Mr. Gage is a fifteen years' resident of Rockford, somewhat known for his efforts at devising an easy path to wealth. He says that the above name to his scheme was suggested by some verses of a doggerel ode in 1875, wherein there was an arrest of development in the first letter of the mythic bird monster, the Roc. and the unsolved question was asked "What * * is a Perpetual Oc?" Out of this, with his scheme, he developed the name of his organization—The Perpetual Order Commercial, with the above suggestive abbreviation. He had a number of pamphlets published with the names of well-known citizens boldly inserted as officers, who state that they are totally ignorant in regard to the matter, and threaten prosecution. The by-laws are quite extensive, and in their preamble denounce the "immoral tendencies of speculation and gambling in grain, produce, etc." This Order is to counteract these tendencies by obtaining regular, authentic knowledge of the market, its values and prices, and upon the most perfect calculations to act as a medium of exchange between producers and consumers. Besides the customary officers there are a legal Counselor, Chiefs of Departments, and Agents of Sections; but the central figure is the Scrip Purveyor. The latter has the whole charge of the Scrip, the handling and disbursement of funds, etc., making a report at the end of each "cycle of thirty-five days." This office is to be held by the originator of this order for a period of twenty years or during his natural life; or, we suppose, until he absconds with any funds whose owners may have been silly enough to supply him with them. Membership may be obtained by "any person, male or female, by the purchase of scrip at the rate of \$1 per share, and shall continue so long as holders are entitled to dividends." Any member may offer a resolution by paying the expenses of printing, etc., and sending copies to each member with form of ballot, which may be cast at any time within thirteen days after date. A two-thirds majority is required. "The scrip is to be sold and issued by the Purveyor in shares of \$1 and upward, and dividends shall be paid, and assessments made as governed by the Perpetual Oc." The above is simply a burlesque on both speculators and brotherhoods, or the development from the inner consciousness of a semi-idiotic maniac. Whether there are enough of his species to make it pay, is to be seen. Almost as strange events have occurred among bucket-shop frequenters.

THE grain men on the New York Produce Exchange are congratulating themselves on the fact that the railroad commission has recommended the abolition of one cent per bushel for elevating grain from elevators into vessels. It is believed that the roads will not delay to grant this, though the New York Central and Erie roads have not said what they will do. A merchant on the upper floor said: "Seeing that this charge is not demanded or received as consideration for any transportation done, and that the companies admit that it would not be charged were it not for reasons which meant nothing more than equalizing with other roads, we think, in justice to us and to ourselves, they will not ignore the reasonable appeals we have made to them and which now form the recommendation of the Railroad Commissioners."

Editorial Mention.

KANSAS comes up smiling with 28,382,919 bushels of wheat this year.

THE yield of wheat in Dakota and Minnesota has never been surpassed.

CORN turns out much better than any one expected. We will have a big crop after all.

SOME additional matter on the grain dump question will be found in the advertising columns of this number.

THE New York *Chronicle* reports seven grain warehouses burned in the United States during the month of June.

R. A. MCGOWEN & Co, of Indianola, Iowa, write: "Each number of your paper is worth the subscription price."

THE PAIGE MFG Co., of Painesville, Ohio, are enjoying a good trade in elevator machinery, boilers, engines, etc., in the Northwest.

SOME of the barley grown in Dakota this year is pronounced by maltsters the best they have ever seen. The yield is also excellent.

THE flurry on Wall street on Monday, Aug. 13, reacted on grain and provisions. One Chicago operator unloaded about a million bushels of wheat.

JOHN HUTCHISON MFG Co., of Jackson, Mich., advertise their corn sheller in this issue. This sheller has many good points and has made scores of friends.

THE wheat crop of Illinois this year has proved almost a blank. It is only a third of last year's crop. Illinois fares the worst of all the wheat states this year.

MR. F. H. MEALIFF, of Lena, Ill., joins our list of subscribers this month. He writes: "I like your paper very well, and think every grain dealer should take it."

THE N. Y. PRODUCE EXCHANGE is among our new subscribers since our last issue. We gather them in, big and little. All the same price, one dollar per year in advance.

Le Moniteur du Commerce, of Montreal, translates what we said in a recent number about the benefits of Erie as a free canal, and thinks the Canadian canals should be free.

THE strike of the telegraphers has played the mischief with business on the exchanges. A number of Chicago commission men are threatening legal vengeance on the Western Union.

A GOOD movement of wheat from Chicago eastward has commenced, and the vessel men are happy. The amount of wheat in store here has been between five and six million bushels.

THE Duc Spherical Elevator Bucket, made by T. F. Rowland, Brooklyn, N. Y., received the highest and only award, a bronze medal, at the recent exhibition of railway appliances in this city.

CHIEF GRAIN INSPECTOR JOHN O. FOERING, of the Commercial Exchange, Philadelphia, sends for all the back numbers of THE AMERICAN ELEVATOR AND GRAIN TRADE, and subscribes for the coming year.

WE omitted to mention last month that the Lenham elevators at Sanborn and Cooperstown, Dak., were being built by Mr. L. C. Barnett, of Minneapolis. Mr. Barnett has been busy this season, and the "Round Elevator" is growing in popularity.

CHAS. KAESTNER & Co., of this city, are enjoying a good trade. They say: "We find trade unusually brisk for this season, and are having a grand rush on Kaestner Mills and elevator machinery generally."

THE Chicago Car Mover, Improved, was awarded the prize at the National Railway Exposition recently held in this city. The new car mover has been recently improved, and is meeting with great success.

MESSRS. DICKEY & PEASE of Racine, Wis., are making an "end-shake" warehouse mill to be used with power only, for which they make some very strong claims. They invite comparison of its work on all kinds of grain with any mill made.

G. M. ROBINSON, Secretary of the Williams & Orton Manufacturing Co., Sterling, Ill., called at our office during a recent trip to Chicago. The Williams & Orton Co. are chronically busy, so we were not surprised when Mr. Robinson informed us that business was brisk.

THE WESTERN GRAIN DUMP Co. of Lincoln, Ill., are having a very satisfactory run of business with the Hinman Grain Dump, orders during the past few weeks having exceeded all their expectations. They will gladly furnish a large engraving of their dump to all applicants.

MR. H. CHISHOLM, of the firm of H. Chisholm & Co., of Meaford, Ontario, Canada, subscribing to our paper, writes: "We are pleased with your journal, and consider it a necessity in any grain business. It contains a deal of valuable information, and we trust it may long continue to be a success in every way."

W. W. INGRAHAM, of this city, the well-known manufacturer of the Excelsior grain cleaning machines, is on an extended trip East, where he has visited several watering places, some of the grain centers and his old home, Burlington, Vt. On his return, Mr. Ingraham will make a tour of the Northwestern elevators.

NOTICE the advertisement in this issue of the Bookwalter Engine, made by Jas. Leffel & Co., of Springfield, Ohio, and 110 Liberty St., New York City. This engine has achieved an immense popularity in situations where small powers are used, and is claimed to be just what elevators of small or medium capacity need.

PARTIES wishing lists of grain dealers and millers, should observe the card of Mr. J. D. Leslie, of Lincoln, Ill., who, at considerable pains and expense, has compiled corrected lists of parties handling grain, by states, copies of which he sells at reasonable figures. Such lists are excellent aids in sending out circulars, etc.

FRED W. TAYLOR, manager of the Philadelphia Grain Elevator Co., Philadelphia, in renewing the company's subscription, writes: "We think it only justice to add our unsolicited testimony in commendation of the worth of your journal, and of the high standard, far exceeding our expectations, you have consistently maintained from the start."

MESSRS. NORDYKE & MARION Co., of Indianapolis, the well-known elevator and mill builders, with a view to stimulate attendance of members of the G. A. R. on "Old Soldiers' Day," Aug. 15, at the National Military Encampment, will award an elegant silk banner to the post which shall turn out the largest number of its actual members, in a body, on that occasion.

J. M. HARPER of Peoria, Ill., well known in connection with the grain dump litigation, addresses a card to the grain dealers of the country in reply to a circular issued by R. McGrath of La Fayette, Ind., whose card also appears in this issue. The reader's attention is directed to both of these notices; for the grain dump question is one of the most important ones before grain men, and one which it will pay to keep posted on.

ATTORNEY-GENERAL MCCARTNEY of Illinois, has given his opinion, in reply to the inquiry of the Illinois Railroad and Warehouse Commission, to the effect that Senator Torrence is eligible to the office of State Weighmaster, and that the office of Senator which he holds does not come within the intention of the Constitution as a ground of ineligibility for this appointment.

PROF. FORBES, State Entomologist of Illinois, reports to the Department of Agriculture that the Hessian fly is still in the wheat-stubble and in the flaxseed throughout the whole southern portion of Illinois. Prof. Forbes had instructed an assistant in that part of the state to examine carefully into the condition of the wheat insects, and the latter has forwarded a considerable quantity of stubble from fields infected with the fly, and also with the joint-worm, showing that both of these insects are still in the fields in a dormant condition. Prof. Forbes renews his recommendation for burning the wheat stubble where practicable, and otherwise deep plowing and rolling.

THE present wheat crop of the Pacific Slope, it is estimated, will exceed that of last year by about 6,000,000 bushels. Charters for iron vessels at Portland, Ore., to deliver at Cork, Ireland, have been effected. The value of wheat in London, of the quality of 1881, was recently \$2.15 per cental; a calculation based on this price and freightage and insurance at 75 cents per cental, allowing for commission, exchange, massing cargo, etc., places the price of wheat on ship-board at \$1.29 per cental, or 77½ cents per bushel. When from this the railroad freights and expenses, about 24 cents per bushel, are taken, the wheat sacked on board cars will be worth 53½ cents per bushel. This showing, according to the *Oregonian*, makes the value of Walla Walla wheat for export, less than 50 cents per bushel to the farmer.

GRAIN FREIGHTS IN CALIFORNIA.

The railroad freight question in California seems to be largely complicated with politics. On July 6, a lengthy letter reviewing the whole subject, was forwarded to the State Board of Railroad Commissioners, by C. N. Towne, General Manager of the Central Pacific. The letter was written by J. C. S. Stubbs, Freight-Traffic Manager of the same road, and contains the substance of his previously given testimony before the Board, relative to a proposed reduction of freights by their order.

From the statements of this paper it appears that the present Board of Commissioners were appointed some six months ago, when this subject was being agitated by the press at large, and that one, if not more of the members, were pledged in advance to this reduction, which had assumed the character of a partizan measure. Mr. Stubbs presents the injustice of such a procedure involving hasty action, without due examination, by a recently elected body, affecting deeply the business interests of the State.

In reviewing the action of the Central Pacific upon this subject the paper claims, and presents various exhibits to prove, that the company's freights have steadily decreased during the past six years from 3.7 cents to 2.9 cents per ton; and that upon grain a reduction had been made of from seven to thirty per cent. on rates within the State continuing in force since June 1, 1881. A comparison of the grain freights of the Central Pacific with those of the Texas and Missouri Pacific roads, the St. Louis & San Francisco, and the two great Chicago roads of the Northwest, shows a large difference in favor of the Central Pacific, while the freights of the two latter Chicago roads are appreciably higher. In the comparison with these Eastern roads, the consideration is presented of the great difference in their relative expenses, and the amount of grain handled, which is much greater at Chicago. The expenses, owing to the physical character of the country and price of labor are less, in the East; the handling of grain directly from elevators into cars by the Eastern roads is also an immense saving of time as com-

pared with gathering it from heterogeneous piles along the track.

This matter is strikingly illustrated by the fact stated that "cars have made two round trips in one day between Aurora and Chicago, a distance of about 50 miles, a thing impossible here (in California) under four days. Another advantage of the Eastern roads is that their return freights about balance the grain sent out. Even of the Iowa Trunk lines the Commissioner recently stated that the East and West tonnage nearly balanced, and, he thought, soon would entirely. The expressed intention of the Board to equalize the freights on grain exported and that brought in for seed, etc., Mr. Stubbs shows contradicts the principles of discrimination in freight charges as developed by the experience and practice of trade universally. The maximum and minimum rates must be so applied that while securing remuneration to the roads they shall bear least heavily upon producers. The addition of a small sum to the rates of the products sold by the farmer would be greatly felt, while the maximum rate placed upon the small amount of seed he imported would cause no inconvenience.

This paper of Mr. Stubbs has evidently produced a profound impression upon the Board and the community. The former has delayed action until late in August and has appointed a special committee to carefully examine the subject and report the results. The ultra-partizan press which had demanded the action of the State Central Democratic Committee, either to effect an extra session of the Legislature to impeach and discharge these recalcitrant members who had violated their pledges, or to call a State Convention of the party, has been quietly sat down upon by the more thoughtful majority, who do not see in this hasty action any promise of aid to the future success of the party, either at home or in the General Government.

THE CROPS IN AUGUST.

The report of the Department of Agriculture on Aug. 10, presents a somewhat more favorable prospect for the corn crop than that of July. There has been an improvement in the appearance of the corn-fields in the New England and Middle states, the Ohio Valley and west of the Mississippi, but it is slight in Illinois, Missouri and Kansas. There is a slight decline in Michigan, due to too much moisture, and in the South from drouth. The condition of the whole crop has advanced from 88 to 89 per cent. of a perfect crop. In 1879, the census year, the condition was 99, and the average yield per acre, twenty-eight bushels. The present returns indicate a yield of twenty-five bushels per acre, or an aggregate of 1,700,000,000 bushels, the same as in 1879. The condition is six points better than in August last year, but the crop is late and the nights have been too cool for rapid development. Fears are expressed that frosts may yet cause disaster. The averages of the principal corn-producing states are as follows:

Illinois.....	86	New Jersey.....	101
Indiana.....	95	Virginia.....	93
Ohio.....	89	North Carolina.....	83
Michigan.....	68	South Carolina.....	70
Kentucky.....	97	Georgia.....	74
Missouri.....	83	Alabama.....	80
Kansas.....	97	Mississippi.....	87
Iowa.....	85	Louisiana.....	100
Nebraska.....	84	Texas.....	93
Wisconsin.....	85	Arkansas.....	87
New York.....	90	Tennessee.....	89
Pennsylvania.....	99		

The average condition of spring wheat in August was 97, the same as last year, but higher than in any previous year since 1877. In the southern counties of Wisconsin, recent rains have injured the crop; the average for the state is 90. In Minnesota bad weather occurred in early spring, and subsequently drouth in the northern counties; the condition is 98, and the yield per acre is estimated at 13½ bushels. The injury feared to the crop of Northern Dakota from excessive heat early in July, has not been realized. Cass and Richmond counties promise a better yield than last year; other counties will scarcely equal it. In South Dakota the harvest is progressing, promising a better yield than last year. The August

returns for the entire wheat crop do not vary essentially from those of July. That there will be a shortage which will require all the surplus of last year and sustain prices, is now certain. By cable from London, Eng., the department is informed that the wheat market is advancing and the stocks are large. The quality of the new crop is fair. With the decrease of acreage the output of European wheat will probably be one-tenth below the average, and one-fifth less than last year. German, French and Russian reports are less favorable. The condition of the United States oat crop is 100, a figure surpassed only last August since 1878, and north of the parallel of 40 degrees, the condition is almost universally high. Storms have caused injury from lodging in some Western districts. The condition of barley averages 95, the same as last year, but higher than in any previous year since 1874. The average yields of the nine states that produce over two-thirds of the entire crop, is as follows:

New York.....	102	Minnesota.....	96
Pennsylvania.....	97	Iowa.....	99
Ohio.....	80	Nebraska.....	102
Michigan.....	96	California.....	88
Wisconsin.....	96		

CONGESTED PRICES.

"Congested Prices" is the title of a brochure recently published in this city, written by Mr. M. L. Scudder. The suggestive little book seems written in no dogmatic spirit, and with the recognition of the complex nature of the subject of price and its determination, the data of which are so numerous, minute and uncertain as to make any classification satisfactory to all, impossible. The term "Congested prices" is taken from an analogy to the circulation of the blood and its derangements, and describes the "prices made in a certain unhealthy condition of trade" in which "the channels of exchange become clogged, and there is a heaping up, a congestion of prices at weak points," which must be rapidly relieved or prostration and ruin in the commercial system will follow. At such times, as in the human system, "mad rushes" are made for relief, and action and reaction occur, increasing often, rather than removing the difficulty.

To understand the cause of this diseased condition and its remedy, requires a knowledge of the nature and healthy action of the force implicated. In the world of traffic this is price. Under definition this seems a very simple thing, and is created by the cost of the production of an article, which includes its carriage to the place where sold, and the demand and supply of the consumer. When the latter is brought face to face with the producer and his product, the determination of price is based simply on these natural relations. The range of such transactions, however, is extremely limited. As communities grow and division of labor occurs, the producer and consumer become separated by thousands of miles of land and sea, and the interval from the purchase to the delivery extends to weeks and months while the immense machinery of transfer and the intermediate hands employed, with all the innumerable contingencies thus created, all come in to complicate this problem of price. In primitive times great fairs, at selected places and periods, brought together the parties interested, or their representatives; but these have been replaced by our produce exchanges and boards of trade, which with their machinery, adapted readily to meet all the demands of trade, have at length become a necessity, without which the vast movements of commerce would be almost entirely arrested. The great central object of these exchanges is to determine prices. Here contracts are made and tested by all the experience of dealers and shippers actually engaged in the transfer of grain, and by an immensely larger number of transactions consisting in dealing or speculating in these contracts, so that they cover at length many times the amount of the grain actually handled. But all of these judgments, in real or speculative transactions, enter into the factors that from time to time fix the market price, until the natural elements seem to be entirely superseded by the action of these infinitely diversified judgments, hopes,

fears, designs, etc., of those engaged in this business. When in the course of twenty-four hours the price of a certain grade of wheat, at the crisis of a speculative congestion, as in September, 1873, declines over 15 cents per bushel, it is not due to a change in the cost of production or supply, but is a fall from a price caused by an artificial demand due to the capricious judgments and actions of dealers.

The condition under which such unhealthy congestions of price occurs is called a corner, which Mr. Scudder defines as, "that condition of the market for any commodity, when one party holds all of the commodity in that market, and also holds contracts for the delivery of a considerable quantity more." Thus the sellers in order to fulfil their contracts, are compelled to buy at the exorbitant prices asked by these holders, which often is beyond their power, and results in their financial ruin. This is not the ordinary course of the healthy development of price resulting from all the dealings on the boards, both in grain and contracts, as underlying the latter is always the right for either party interested to demand the grain contracted for; there are the natural limits to these prices of the cost of production and the intensity of demand. These, however, are subject to conjecture and calculation, and give a range too great for safe traffic, and, therefore, within these limits, the exchange determines, for the time, the real price, not the variable ones "offered" or "asked," but those on which producers, dealers and consumers can rely, and which with our telegraphic means for bringing the existing facts relative to all the markets of the world, at once to each center of trade, are borne out during its healthy conditions in its practical operations. It is well to notice in this matter of corners in the light of the view that contract dealing or speculation is spoken of as all of the nature of gambling, and injurious to trade; that the dealings that create corners, the *bete noir* of the exchange, are in the main real purchases of grain, and the efforts of the sellers are directed to buying at reasonable prices, and delivering the grain on contract. Many corners have been broken by the unexpected development, stimulated by the high prices of the market, of new resources of supply beyond the power of the manipulators to control. Again, the general rule, established by facts, that in the end the manipulators are the losers, are shown in the final efforts to get rid of the grain actually purchased by them. In 1879 these holders found they had greatly miscalculated on the absorbing qualities of foreign markets, and had to sell their accumulated grain at heavy losses. The July wheat corner of 1882 was carried through and largely ruined the sellers, but when the manipulators had finally disposed of their wheat, they too found that they had lost a half million by the transaction. In such a case doubtless the producers, to a great extent, gain the advantages of these losses. But in the long run, the irregular distribution of fortune's favors, with the injury to healthy traffic and the following decline of prices, together with all the injury to those numberless industries which are closely connected in their interests, with the bread traffic, make the benefits supposed to be conferred upon the producers of doubtful value, more than counterbalanced by their hindrances to, and evil influences upon the steady, healthy growth of production and trade.

There are very curious opinions often held by those interested in the study of the causes of these price congestions. There is a general tendency to look upon them as periodic, falling under some law of cycles such as noted weather prophets have imagined themselves to have found, on which their wonderful predictions are based. These notions, half unconsciously held, crop out in the views expressed by writers who speak of the time when a panic will be due, and the signs of its approach. Mr. Scudder refers to the little book of an Ohio farmer published in 1876, called "Benner's Prophecies." These prophecies predicted prices of pig-iron and of hogs during the years ending in 1882-3. There have been some wonderful coincidences in his iron predictions, but none of his predictions as to the price of hogs have been verified.

There are no such calculable elements in the

factors of the problem of unhealthy prices, either as to inflation or decline. Like financial panics in which they occupy the most important position, they are necessarily unexpected, and no foresight has, or probably ever will predict them until the evidence of their actual existence is already seen. Our only protection from the recurrence and ruinous effects of these congestions of prices, as well as panics, must lie in a larger knowledge of the elements of healthy trade, and a firmer confidence on the part of capital in its capacity judiciously used, to check the mad rush of holders and dealers in commodities and securities, to free themselves from their possessions, like the frantic plunges of the runaway team to get free from the debris of the carriage to which it was attached, and by calm methods, taught by reason and experience, treat these congestions, until they are slowly and quietly relieved, and the flow of traffic through the great channels of commerce again resumes a healthy movement. A decline of prices should be regarded as a natural reaction from great commercial and business activity and a necessary resulting condition, and both labor often at such period, frantically engaged in useless strikes, ruinous alike to the employe and to business and capital, producers and dealers, should calmly and patiently meet its emergencies.

It is stated that the low rates on lake grain freights have rendered it impossible for vessels in this business to make more than their running expenses. The large propellers that carry large quantities of freight and make rapid time are the only vessels that make any profits. A vessel agent says that this is not due to any falling off in the bulk of freights, but to the low rates caused by competition. Ten years ago when the ordinary rates were about seventeen to eighteen cents per bushel to Buffalo, money was made although the expenses were greater, but the introduction of heavy tonnage has given the business to monopolists. The railroads also, this gentleman says, enter into the competition and bid for freight at lessened rates. The number of vessels at the immediate command of the telegraph is now too great for the old freight blockades when vessels made often enormous sums. A single schooner, still afloat, paid for itself in two years, and ten years ago earned \$19,000 in one year. Last year the owner thought himself doing well in earning \$2,000. The facilities for building also have improved so much and so rapidly that the older vessels have greatly depreciated in value, even during the period of two years.

THE Toronto *Globe* explains why so many Canadians come to Dakota, especially farmers. It says: "They know that in Manitoba they had to purchase Canadian implements that were protected to the extent of 25 per cent. *ad valorem*, or pay that enormous duty on imported American goods, and that this duty has not been raised to 35 per cent. *ad valorem*. They also know that here one railway cannot monopolize the business of carrying their grain to market, while in Manitoba the C. P. R. enjoys such a monopoly. They know that even if they are settled in an out-of-the-way corner of Dakota and require railway facilities, and our railway company declines to furnish them on reasonable terms, another company will, while in Manitoba they would be practically at the mercy of the C. P. R. for nearly twenty years to come."

THE COMMISSION MERCHANT AND THE STRIKE.—Who is that man with the White Hat! He is a Commission Merchant, my Child. But see how Mad he is! He is Red in the Face. He swears. He beats the Air with his Fists. Has Anybody come the String Game on him? No, my Child? He has just received a Telegram from one of his country customers, saying: "Car a you Nevertheless Yesterday Bushels Chagrin Therefore Suddenly." And He Won't Have It That Way? No; he can't Make out Whether the Man has sent him Potatoes or wants to know the Price of Oats. Hence His Cuss Words. Hence his Desire to Plug the Plug Operator. Hence his Love for the W. U. T.—*Free Press*.

Track-laying has begun on the St. Paul & Omaha Railroad extension from Wakefield, Dixon county, in Nebraska, toward the north, and twenty miles are graded and stakes set for about forty miles to the center of Cedar county.

Railway Intelligence.

The California railroad commissioners have reduced railroad rates from a maximum of ten cents per mile to six cents across two deserts, two mountains, and on one branch road, and to four cents per mile on all the rest of the Central and Southern Pacific systems. This is the most sweeping reduction probably ever made in any state. The roads will contest the action of the Board.

It is announced that the Chicago, Milwaukee & St. Paul company has ordered the extension of its Hastings & Dakota division to Bismarck, the new capital of Dakota, on the Missouri River. The Chicago & Northwestern which never proposes to be behind its competitor will very likely push on to the same point, while the Chicago, Rock Island & Pacific—as represented by the Minneapolis & St. Louis company, and the Wabash, St. Louis & Pacific—are also reported as having their minds on Bismarck as a terminal point.

In 1880, 7,175 miles of track were laid, of which only 2,200 were reported in the first half. Making allowance for the fact that our collection of information in regard to railway building during the past two years has been kept up more closely to date than was previously the case, it is probably fair to assume that the work already done this year is less than one-third of the total which will be shown at the end of the year, so that we may still estimate the new construction for 1883 at not far from 8,000 miles.

The Ottumwa, Cedar Falls & St. Paul R. R. Co. has been incorporated, with a capital of \$2,000,000. The object of the company is to build a road from What Cheer, in Keokuk county, due north to a connection with the Chicago & Northwestern at Belle Plaine. The project is said to be the outgrowth of the recent trouble of the Northwestern Fuel Co. of St. Paul, with the Burlington, Cedar Rapids & Northern. The Fuel Co. have valuable coal mines at What Cheer, with which they desire to connect, and this project is for that purpose, so as to render them independent of other railroads. A large amount of money has already been expended for right of way, and it is expected to have the road in operation Oct. 1.

Mr. McDonald, the railway contractor, has arrived at Winnipeg for the purpose of commencing work on the Souris & Rocky Mountain R. R. The engineers, who have been selected by General Manager Pew, will at once proceed to stake out the first 100 miles of road, that being the extent of the first contract taken by Mr. McDonald. The grading of the Manitoba & Northwest R. R. is proceeding at the rate of half a mile a day and this rate is to be considerably increased in a few days. Mr. Secretan, chief engineer of this road, reports that the work is being pushed as rapidly as possible. A gang of graders are now at work within fifteen miles of Minnedosa and another gang will be put on three or four miles out of that town in a few days. The contractor expects to have the grading completed not later than the fifteenth of September, or five days after the time agreed upon in the contract, and rails will be laid to Winnipeg within three weeks after that date.

In answer to any inquirer as to which is the largest railroad company in this country, the New York *Journal of Commerce* gives the following interesting information: The Union Pacific is the largest, 4,269 miles; capital \$65,322,155. The Pennsylvania operates 1,173 miles, capital \$85,462,300; New York Central, 993 miles, \$89,428,300 capital; Wabash, 3,348 miles, \$49,954,700 capital; the Missouri Pacific controls 5,535 miles, with a capital of \$80,000,000; Louisville and Nashville, 2,028 miles, capital \$25,000,000; Lake Shore 1,277 miles, capital \$50,000,000; Illinois Central, 1,892 miles, capital \$29,000,000; Chicago & Northwestern, 3,278 miles, capital \$37,336,499; Chicago & Rock Island, 1,381 miles, capital \$41,960,000; Chicago, Milwaukee & St. Paul, 4,353 miles, capital \$35,805,744; Chicago, Burlington & Quincy, 3,136 miles, capital \$69,814,191; Central Pacific, 2,995 miles, capital \$59,275,500; Baltimore & Ohio, 1,553 miles, capital \$19,793,556; Northern Pacific, 2,091 miles, capital \$90,409,132; Erie, 1,020 miles, capital \$85,975,100.

Probably no other section of the country is securing as many new railroads as Southwestern Indiana. Many new roads are projected and scores of little villages and hamlets are excited over the prospect of securing the first railroad in their history. There are over half a dozen new railroad projects now on foot within a territory within a radius of less than fifty miles. One of the earliest railroad projects of the season that came before the public was the Vincennes & Ohio River. This new route is being surveyed now and will extend from Vincennes, Ind., to the Ohio River at Rockport. Another new line is the Evansville, Washington & Brazil. This road is already completed a distance of thirty miles from Washington, a city of 5,000 inhabitants on the Ohio & Mississippi Railroad, to Oakland City, Pike county, on the Louisville, Evansville & St. Louis Air-Line. It is thought probable that the road will be completed through to Evansville this summer, and north to Brazil, on the Vandavia. The new company ask a donation of a 2 per cent. tax to aid in the building of the road. It is under control of the Evansville & Terre Haute Railroad Company, who propose to make it a feeder to their main line. In the midst of all this excitement another new railroad scheme has started up. It is no less than the building of the Chicago & Great Southern Railroad through Southern Indiana. Last week enthusiastic meetings were held in Daviess and Greene counties, on the

line of the proposed route, and Mr. E. B. Cuyler, who represents the company, was present, and announced that the road was now completed from Chicago to Veedersburg, in Fountain county, Ind., and would reach Brazil by the first day of November. This road is to connect at Jasper, Dubois county, with the Louisville, Evansville & St. Louis Air-Line, which runs to the Ohio River at Alfordville, Daviess county. A meeting was also held, when it was proposed to vote a 2 per cent. tax to aid the road, which will cross White River at Portersville, and lap the Ohio & Mississippi at Montgomery. The company has plenty of money, and the scheme will be put through at once. This road will run from Brazil to Worthington, thence to Bloomfield, Greene county, thence south, and give an unbroken line across the state to the Ohio River.

IMPROVEMENT OF THE MISSISSIPPI AND ITS TRIBUTARIES.

Delegates to the number of between forty and fifty from the various permanent special committees in the Mississippi River improvement, met at the Southern Hotel in St. Louis, Mo., on July 11, and were welcomed by Mr. J. C. Ewald, President of the Merchants Exchange. A paper was read by Mr. Geo. L. Wright, Secretary of the special committee of the Merchants Exchange, in which the causes of the failure of Congress to make the necessary appropriations and the consequent loss of about \$6,000,000, were fully presented. An organization was then effected with Hon. D. B. Wood of the New Orleans Cotton Exchange as President, Geo. L. Wright, St. Louis, Secretary, and several vice-presidents representing the various sections interested. Committees on business and resolutions were also appointed. At the afternoon session Prof. Phelps, chairman of the business committee, reported recommendations to the following effect: That a committee be permanently organized to be called the Central Committee on the improvement of our Western waterways, with headquarters at St. Louis. That all existing, and hereafter organized permanent committees of the various commercial bodies and localities, be considered branches, to report to this Central Committee, facts and suggestions useful in prosecuting the work, and that its membership consist of one delegate from each of these branches. That a convention be held to which every member of the local committees be invited at such time and place as shall be decided. The report was unanimously adopted, as were also the following resolutions:

Resolved, That it is the sense of this meeting that a river convention be held in the city of Washington, not later than the month of February, 1884.

Resolved, That it is the duty of the commercial bodies of the cities and towns, and of the farmers and laborers in each Congressional district in the Mississippi Valley, to petition their respective Representatives in Congress and uphold and vote for adequate appropriations for the improvement of the Western waterways.

Resolved, That in the selection hereafter of members of Congress from the Mississippi Valley it should be the especial care of all the people interested that no candidate be selected except those pronounced in favor of the river improvement.

Resolved, That the Central Committee fix the time and place for calling the river convention, and that this committee prepare in due form the call for said convention.

Resolved, That the seasoning of time has but rendered more valuable and necessary to the public weal the proceedings of the Mississippi River improvement convention held in St. Louis, Oct. 26, 27, and 28, 1881, and we commend its action to the public mind.

An elegant banquet, in honor of the delegates, was served in the evening at the University Club by the Merchant's Exchange. This convention at Washington is expected to be the largest and most influential ever held upon the subject of our waterways and their improvement.

BROOM CORN IN KANSAS.

This crop has been for the past six years growing steadily in area until this season, when the area decreased, as compared with the previous year, 43,497 acres, or nearly 41 per cent. The cause that has induced this large decrease does not arrive from non-success in yield, for the section of the state where the bulk of the crop is grown is peculiarly adapted to its culture, and large crops have resulted each year. The failure to plant the usual area was induced by the poor prices received during the past two years for the product, farmers not being able to realize a profit equal to that received from other crops. The crop is grown principally in Central and Western Kansas, and is well adapted to the soil and climate of those regions. Twenty-five counties increased their area slightly, while the remaining fifty-six lost heavily. The counties increasing lie generally in the eastern portion of the state, and this small increase of 3,455 acres may be looked upon as an experiment. The broom corn counties, as has been stated heretofore, have decreased largely. The condition of the crop this year is fully as favorable as it was in 1882, when a very fine crop was gathered. When better and paying prices can be obtained for broom corn, Kansas will, without doubt lead the Union in this crop.

INTERESTED IN THE FUTURE.—Frank C. has a very bright boy, who comes on 'Change quite frequently. It is said that some time ago, when he first came on, he went on the upper floor with his father just before the first call of grain, and seeing little Willie, the caller in the box, said to his father: "Pa, I didn't know this was a church. Look at the minister in the pulpit and see the people sitting down; but see, pa, what funny pews, and there are no ladies here." And his father said: "No, my boy, you are wrong; this is not a church, although these are all good Christians, and are very much interested in the future—price of wheat, etc."—*Trafton's*.

The Trade.

Howes & Ewell of Silver Creek, N. Y., have just completed, for an elevator, a separator with a capacity of 2,000 bushels per hour.

The Simpson & Gault Mfg. Co. of Cincinnati, Ohio, report an unusual increase in their orders for corn mills and grain cleaning machinery.

William A. Harris, the well-known Providence engine builder, is erecting a new brick building four stories high, 170x40 feet, to be used as a storehouse and stable for horses, also a new blacksmith shop 45x45 feet, with monitor roof and glass sides.

Mr. Wm. H. Lotz, M. E. of this city has sold two double power shovels (Lotz patent) to Mr. Ferdinand Schumacher of Akron, Ohio, to be placed in his new mill, which is about completed. Mr. Lotz has also sold a machine to C. A. Pillsbury & Co. Minneapolis, Minn., for use in their large mill.

The Chicago Rawhide Mfg. Co. are in receipt of another order from Sidney, New South Wales, for 500 feet of their double belting, made especially for that trade. An order for a similar number of feet is also in from the Chicago & Alton Railroad, together with large orders from New York City. This company took three medals at the late Railway Exposition.

Messrs. Shields & Brown of this city have lately shipped a large bill of Bradley's Insulated Air Coverings to Boston, Mass., for covering the steam pipes in three public schools. They have also just completed a large contract for the Elgin National Watch Co. and have filled orders from the Woodman Linseed Oil Co. of Omaha, Neb., the Shreveport Cotton Compress Co., Shreveport, La., and the Montevallo Coal & Transportation Co., Montevallo, Ala.

The following is from a Kansas paper, and is quite complimentary to the Great Western Mfg. Co. of Leavenworth. The paper says: "The Great Western Mfg. Co. established in 1858, is the most extensive works of the kind in the West. Their products include engines of all descriptions, portable or stationary, of any capacity ordered, flouring mills and saw mills, complete mill gearing, shaftings and pulleys of all kinds, pumps, mining machinery, iron work for buildings, iron fences, etc. Many of the larger engines and the finest mills in the country were turned out by this establishment. It gives employment to about 150 men, melts from ten to fifteen tons a day of Missouri and Scotch pig iron, and does an annual business of about \$200,000. A portion of their buildings were destroyed by fire during the past winter, but with an energy that has characterized the company from the day of its organization, they have rebuilt on a larger and grander scale, which affords them greatly increased capacity."

All who have occasion to employ sieves for different purposes are aware of the necessity of using those with different meshes in order to accomplish the sorting of grain, seeds, and other materials in the most satisfactory manner. The idea of a sieve so constructed that the mesh can be changed at will, without the necessity of removing the material from it, is one that must commend itself to all who have occasion to use such an article. The Milton Sieve Co., Limited, Milton, Pa., are manufacturing an article of this kind. Instead of having a round form, as is customary with many kinds of sieves, this has a square or rectangular rim, and the change in the mesh is caused by jointed corners of the rim, by which it can be compressed so as to be diamond or lozenge shape, instead of square. Of course, each intersection of the wires forming the mesh of the sieve is correspondingly affected, and therefore the mesh is changed in a proportionate degree by changing the shape of the sieve. One corner of the sieve is provided with a segmental-shaped gauge, by which the sieve can be held in any desired position, or, in other words, the mesh maintained of any desired size. The manufacturers state that sieves of this kind will separate rye from wheat, and clean grain from cockle and all foreign seeds. The statement is also made that they will clean clover seed from the various weeds with which it may be mixed.

Few persons not connected with the iron or hardware trade have any idea of the vast amount of Sheet Iron Roofing that is now used in building in all parts of the United States, Mexico, and South America, and particularly in the Southern and Western states. In the territories and prairie states, where timber is scarce and dear, large warehouses, railroad depots, mills, storehouses, etc., are frequently constructed entirely from this material, or rather all except the framing of the building, the inner and center walls, ceilings, roofs, etc., being of sheet iron which renders them not only fire proof but almost indestructible, for the peculiar preparation of the iron in its manufacture, and an occasional coat of paint prevents rusting or injury from the weather. The crimped edges and lockjoints render them both wind and dust proof, and so easily applied to the roof or walls of a building, that any one who can use a hammer and pair of clip shears can apply the metal sheets almost as well as a skilled workman. But few nails are used in putting on the metal, and these are so placed within the ridges that they can not become loosened, and allowance is made in the crimping for expansion and contraction from heat or cold; every sheet of the metal receives a double coat of weather-proof paint before it leaves the manufacturer, which is sufficient to protect it from the weather for several years. The great demand for sheet

iron roofing within the past few years has caused many worthless articles to be put upon the market, and thus, to some extent, brought it into disrepute, but the "Porter Iron Roofing," which is made under the celebrated Belt Patents, is now acknowledged as being one of the best that is made, and is extensively used in all parts of the United States, Mexico, and South America, and we cheerfully recommend it as first class in every respect. The company publish a neat illustrated catalogue which is sent free to all applicants.—*Merchant and Manufacturer.*

GRAIN AT THE ATLANTIC PORTS.

The late harvest of this year has affected the comparative shipments of wheat to the seaboard very largely. During July, the receipts at Baltimore fell short, 900,000 bushels, of those of last year, while the New York receipts fell off considerably more for the same period. The receipts at the latter port for the week ended July 28, compared with the same period of last year, show a decline of nearly 1,100,000 bushels. Receipts are, however, on the increase, and point to a large movement in August. As other ports have not yet opened, Baltimore is considerably in advance during the first week of August her receipts being about double New York's, and more than one-half the aggregate at all the ports. The following table presents the receipts of wheat and corn during the periods mentioned at the Atlantic ports:

RECEIPTS FROM JAN. 1 TO JULY 27, 1883.		
AT	Wheat. bus.	Corn. bus.
New York.....	11,527,620	20,359,642
Baltimore.....	6,710,682	9,104,403
Philadelphia.....	1,928,720	5,976,725
Boston.....	1,354,771	5,954,888
New Orleans.....	1,718,806	7,584,914
Montreal.....	3,667,643	1,765,942
Total.....	26,908,242	50,746,514

RECEIPTS FROM JAN. 1 TO JULY 27, 1882.		
AT	Wheat. bus.	Corn. bus.
New York.....	14,685,317	8,680,728
Baltimore.....	3,063,347	1,660,800
Philadelphia.....	1,837,322	2,233,570
Boston.....	1,026,262	4,310,071
New Orleans.....	1,125,231	1,958,336
Montreal.....	2,568,559	579,869
Total.....	24,906,038	19,373,374

These tables show that New York's receipts of wheat, during the period noted, are less by 3,100,000 than last year, being the only Atlantic port showing a decrease. Baltimore, during the same period, gained about the same amount that New York lost; while the former made a gain in her corn trade of over 450 per cent. against the 140 per cent. gain of New York. Of the other ports, the gains of New Orleans were much the largest, being 600,000 bushels of wheat, and 5,600,000 bushels of corn. Baltimore takes the lead in her gain in wheat, and her export statistics, it is said, present the same favorable results. The exports of wheat during the month of July this year were very light as compared with those of the same period of last year. Then the preceding shipments had been light, and European stocks were low, while our harvest was abundant and early. This year foreign markets have been kept supplied with Indian, Russian and other foreign wheat, while the American wheat has been relatively dearer and less sought after. There have been also complaints made abroad as to the inferior qualities of the grade No. 2 red winter wheat, that has been shipped from some of our ports; there will be, therefore, a scarcity of this grade in foreign markets, and a demand for it on the Atlantic ports, where the prices of the American markets will permit orders to be filled.

GRAIN'S CHOICE OF ROUTES.

The experience of the last three years indicates with tolerable conclusiveness that when ordinary conditions rule, the grain movement is largely by water in preference to the rail routes. The eight principal Northwestern markets during the three months, this year, to July 14, that navigation had been open, shipped only 33.9 per cent. of their grain by rail, the balance going by water. In 1882 the grain movement by rail from the same markets was 39.3 per cent. of the whole, and in 1881 it was 39.7 per cent. of the whole. In 1881 an unusual condition prevailed to influence the movement in favor of the rail routes, and last year also, there was an unusual reason why the railroads should be favored. In 1881 the consideration was extremely low rail rates, being only 15 cents per 100 lbs. from Chicago to New York against 30 cents per 100 lbs the previous year. In 1882 the cause operating in favor of the roads was the urgency for quick marketing of the big crop. In a great measure our magnificent harvest last year found the world short of breadstuffs. There was a demand for quick work in getting large quantities of the new grain to Eastern and foreign consumers. Hence it was rushed through by rail, but for only a short while did the roads gain upon the water routes. The latter soon resumed their natural advantages. As to the river movement from St. Louis, in 1881 we shipped 19,458,981 bushels of all grains by river against 20,050,237 bushels by rail. Last year we sent away 25,856,764 bushels by rail against only 15,683,339 by river. The reasons already named apply with as much force to the St. Louis trade as elsewhere. We think the movement from here this year will prove largely in favor of the water route.—*St. Louis Miller.*

Notes from the Exchanges.

Dell Rapids, Dakota, is to have a board of trade.

The Chicago Open Board of Trade has passed an amendment to its rules providing that its own bonds shall be accepted for margins on contracts. These bonds will probably be limited to \$125,000 and bear six per cent. interest, and will be used to erect the new building. The Board hopes in this way to negotiate most of its loan, which will be secured as a mortgage on the new building.

The Provisional Board of Directors of the Winnipeg Grain and Provision Exchange held a meeting recently, in Winnipeg, Manitoba. A deputation was appointed to wait on the city Board of Trade, and bring before them, the necessity of an elevator system in Winnipeg, and to see if steps could not be taken for the furtherance of such an object.

A number of the members of the Chicago Board of Trade have called upon the City-Attorney Grinnell, and he has agreed that they shall be let alone until the license test case has been decided, if they will agree to be bound by the decision. Those who do not consent, it was intimated, would be rather sharply dealt with as individuals. The objection of the members is not to paying the small license fee, it is said, but to the implied power of revoking these licenses by the mayor for insufficient reasons.

Edward P. Savage, Chicago, Ill., has filed a petition in the Circuit Court to compel the Produce Exchange to readmit him to membership. He states that he has been a member since 1874, and his title was never questioned until April 13, 1883, when he offered to pay his annual dues of \$20 for 1883, which were refused on the ground that they had not been paid within thirty days of their levy, and he has since then been refused membership. He claims that the by-laws give him a year in which to pay.

The semi-annual report of the Board of Managers of the New York City Produce Exchange recently presented, contains the following statements: The credit balances are, on the surplus fund account, \$2,746,906.80; on current expense account \$118,734.80; in the grain inspection department \$62,539.76. The margins deposited during the six months were \$5,827,730. The sales of wheat were 34,956,000 bushels, corn 24,596,000 bushels, oats 11,080,000. Seventy-three complaints were brought before the Complaint Committee and disposed of. The obituary record contains the names of the following deceased members: W. Boyce Allen, William Appleton, William P. Bensel, Thomas D. Bishop, Rudolph C. Burlage, William J. Burgess, E. D. Carpenter, G. T. Chambers, A. M. Coffin, J. G. Dale, H. B. Elliman, E. W. Fargo, Robert Gasten, Frances T. Montell, H. M. Reed C. D. Schroeder, E. D. Truesdell and F. B. Wallace.

A meeting of the Grain Trade was recently held on the Produce Exchange of New York City to discuss the advisability of adopting a rule to prevent brokers from increasing their earnings by buying wheat at a fraction less than the price their orders expressly stated, and pocketing the difference themselves. The broker, on a purchase, say of 8,000 bushels, will thus add to his brokerage \$2.50 or \$5.00 or as much more as he can obtain. The following resolution was unanimously adopted: *Resolved*, That the Grain Trade hereby request the Board of Managers to adopt a floor rule regulating transactions in future contracts for property whereby contracts shall be deemed irregular when on the basis of a money consideration added to or deducted from the contract price, and such transactions shall be considered a misdemeanor, and punishable under section 32 of the by-laws. This practice is generally considered demoralizing to the trade, and therefore reprehensible; it is among the influences that endanger the principles of clerks who often risk considerable money in this way.

There was recently posted on the bulletin-board of the Chicago Board of Trade, under the ten days' notice law, two amendments to Rule No. IV., that had already been approved by the Directors, which are in effect as follows: Any member of the Board, who shall in the way of business, be associated with, or act for individuals or associations, etc., dealing in the fluctuations of market prices without a bona fide transferral of the commodity dealt in, shall be thereby deemed unworthy of membership, and on trial in due form, on conviction, shall be suspended from membership for such time as the Directors shall deem proper, and on a second conviction may be expelled. The object of this amendment is evidently to suppress all "bucket shops," and similar connections, with the Board and its transactions. The object of the second amendment is the appointment by the Board of Directors of an efficient corps of market reporters, whose duties shall be such as usually pertain to this office, in obtaining all required quotations and information as to market prices, etc., and transmitting them, by telegraph or other channels, to the parties entitled to them. This corps shall act under the direction of the Board of Directors, and forward these reports only to such parties, business men and correspondents, as shall have complied with the conditions as to forms of application, payments, modes of transmission, etc., as shall have been made by the Board of Directors. In regard to this service, the Board of Trade will assume no responsibility except reasonable care in their compilation, which may be performed or withheld at the pleasure of the Board. A list of all such correspondents shall be kept by the Secretary subject at any time to the inspection of any member of

the Board of Trade who desires it. The objects of these amendments are similar and perfectly obvious. They are yet to be acted upon by the Association before becoming a part of the rules.

By carefully weighing a small sample of wheat, counting the number of kernels in such sample, and multiplying by the number of times the weight of such sample is contained in the weight of a bushel, we have found that of good plump kernels there are from 650,000 to 750,000 in a bushel. Accordingly one bushel of seed to the acre will allow from fourteen to seventeen kernels to each square foot, or one plant to every third inch in either direction. If all the seed grew, this would be quite thick enough, as one plant often sends up a dozen or more stalks.

Special Notices.

The Chicago Scale Co. sell Scales of all kinds also Portable Forges and Blacksmiths' Tools of all descriptions at about one-half usual prices. Buyers will save money by sending for their Price List.

Elevator Men—Howes, Babcock & Ewell, of Silver Creek, N. Y., make a full line of wheat cleaning machinery. Read their advertisement on first cover page.

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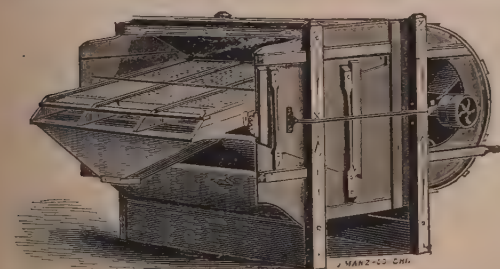


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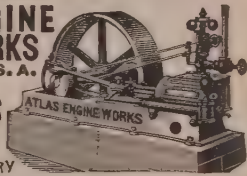
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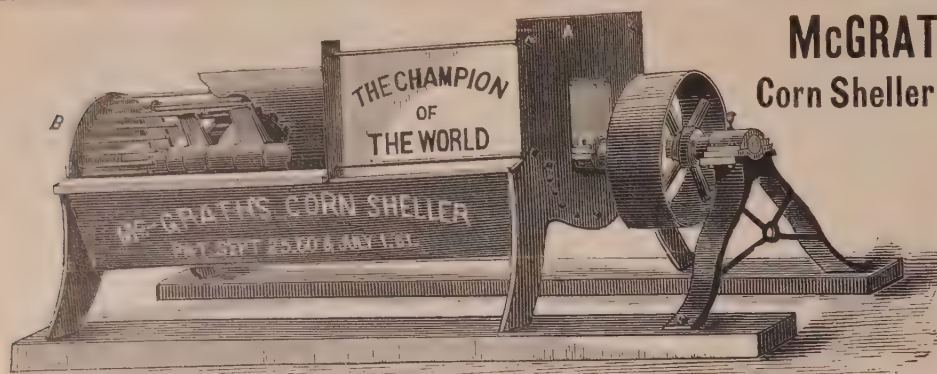
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Manufacturers of
McGrath's Hornet
AND
**McGrath's Twin Corn
Sheller and Cleaner.**
McGrath's "Champion
of the World,"
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Dump. Also Shafing,
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of every description.
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LISTS OF MILLERS —AND— GRAIN MERCHANTS.

I will furnish the Name and Postoffice Address of 5,693 Grain Merchants, and 9,368 Millers in 14 States, at Prices named in my Circular.

GUARANTEED CORRECT.

I will furnish the entire list of 15,061 for \$7; the 9,368 millers for \$5, or the 5693 grain merchants for \$4.

Correspondence Solicited.

Resp'y, **J. D. LESLIE,**
Send for Circular. **LINCOLN, ILL.**

TO THE GRAIN DEALERS OF THE UNITED STATES:

I am informed that one JAMES M. HARPER, of Peoria, Illinois, formerly of El Paso, Ill., is representing that he has the control of all the Grain Dump patents issued, and is endeavoring to collect royalty of all men using what is known as the rail dump, which consists of a pivoted track for dumping grain.

This is to notify you that I have the first pivot track or rail dump patent issued by the United States, and that a suit is now pending in the United States Court at Indianapolis, entitled "Swickard *et al.* vs. McGrath *et al.*," and also a suit is pending in the United States Court at Chicago, Ill., entitled "Swickard *et al.* vs. Kisser *et al.*," which suits will fully settle the question as to who has the true patent to pivot track or rail dumps.

Mr. Harper controls no pivot track or rail dump patent. His Swickard patent describes itself to be a platform dump. The cut he publishes in the *Elevator and Grain Trade*, does not represent his dump, but represents ours. Why does he not publish a picture of his own dump? He boasts of his suit against me. "He laughs best who laughs last." Let him wait until the court decides. The court has not granted even a temporary injunction against me. He seems to think because his patent is the oldest that that settles it. Unfortunately for him the courts do not so hold.

If I win my case, as my attorneys are confident I will, then all these royalties on the pivot track dump are due to me. I do not publish this as a boast or a threat, but only to say that the only safe way for grain men to do, is to await the trial of the above suits, which will be in a short time now, and thereby avoid double payment.

He further threatens grain men by saying that "suits will be vigorously prosecuted." Why then has he permitted his suit at Chicago against the Risser to drag, and abandon, without settlement, a field of several hundred dumps, and go to new fields with threats of prosecution. If he has faith in his claim, let him establish it in the Risser case, and that will obviate a campaign on the part of traveling men of boasts and threats.

R. M. McGRATH,

Proprietor of Patent 115,759, dated from June 6, 1871.

For further Particulars Address

HON. A. J. BELL,
ATTORNEY AT LAW,

Grand Opera House, - - - Peoria, Ill.

M. F. SEELEY

J. S. SEELEY

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C. R. DeLAMATYR



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We build a "SEELEY" ELEVATOR that stands at the head of Elevators as a self-binder stands at the head of reapers. We furnish

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Also furnish all kinds of

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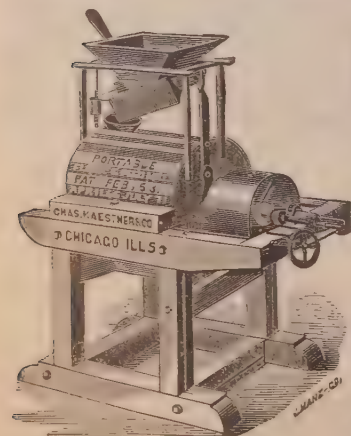
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Seamless Rounded Corners.

No seams to burst; no corners to catch or clog; "takes" easily, and delivers promptly—not liable to carry down the back leg.

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And freedom from projecting seams, rivet heads, bands, etc., makes it run easy, saves power, reduces strain or wear and tear of belting, etc.

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Will outwear three or four hand-made buckets. It meets the advanced ideas of the times successfully, and is nearer perfection in every respect than any other bucket made.

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CAPACITY,

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In 10 hours.

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Superior to all other shellers in simplicity, durability, and effectiveness in working. Runs with less power than any other sheller of equal capacity. Cleans the corn from the chaff, shells without breaking the cob, and will work with damp corn as well as dry. Can be adjusted to different size of corn ears without stopping the machine. Two styles made, geared, and not geared. Write for circulars and particulars.

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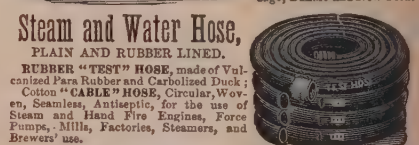
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WITH
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BEST IN THE WORLD for Packing the Piston Rods and Valve Stems of Steam Engines and Pumps.



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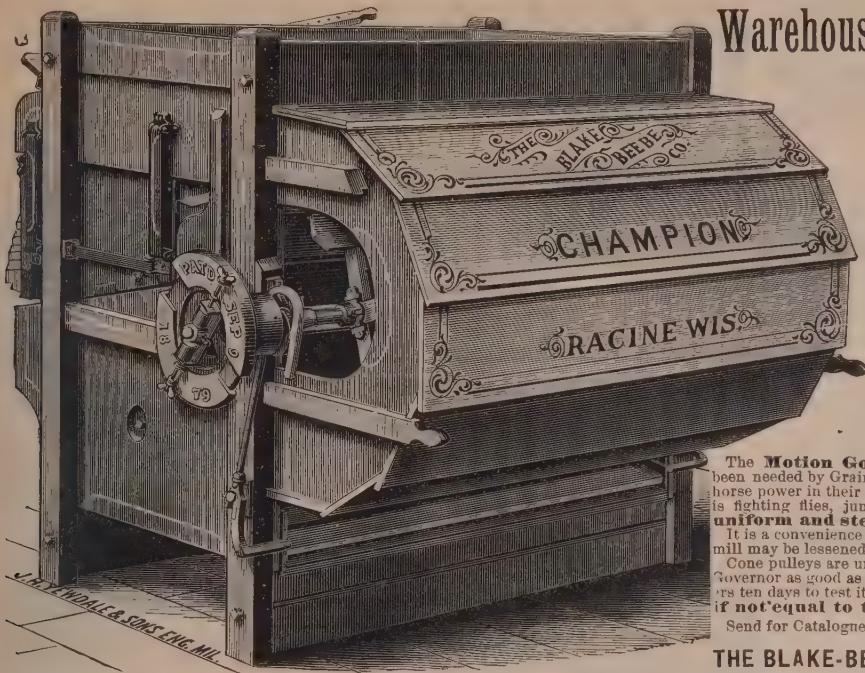
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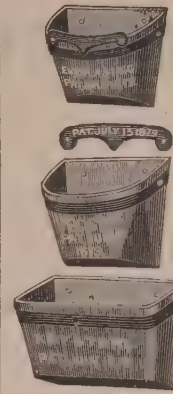
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The **Motion Governor** is something that has long been needed by Grain men, particularly by those who use horse power in their elevators, for it matters not if the horse is fighting flies, jumps or runs, this Governor preserves a **uniform and steady speed**. It is a convenience with steam power, as the speed of the mill may be lessened or accelerated by it in a moment. Cone pulleys are unnecessary with it. We guarantee this Governor as good as represented, and we will allow purchasers ten days to test it, with the **privilege of returning if not equal to the guarantee**.

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Manufactures three of the best elevator buckets on the market. The "Everlasting" is round faced, no corners to catch; superior carrying and emptying capacity, with patent malleable iron lip. Outwears any bucket in the market. The "Boss" has an oval front and square bottom. Light, strong, and durable; lip can be attached if desired. The "Keystone" is as near perfect as a square cup can be. The corners are rounded, with double bottom, and substantially made. Price as low as ordinary buckets. Best of testimonials. Sold to mill furnishers generally. Order from your furnishers or of us direct. They pack closely. Elevator Bolts at manufacturers' prices.

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PRINTING of Every Description.

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TO THE GRAIN DEALERS

Whom It May Concern:

A Circular from R. McGrath is before me in which the author of the said circular says that he has the first Pivot Track or Rail Dump Patent issued by the United States, etc., and known as McGrath's Patent, No. 115,759.

The following are the facts:

One of the patents I control was issued to Noah Swickard, October 13, 1868, while that to McGrath was issued June 6, 1871. You will notice the McGrath was issued some two years and seven months after the Swickard. Now who has the first patent? You will also notice in their circular that they do not give the date of the McGrath Patent, only the number. Why didn't they give the date when they claim their patent as the first? No doubt the date was left out for a purpose, for in all our notices and printed matter we give dates of all our patents, and four of the same were issued before the McGrath. If they had given date of their patent, it would have given them away.

Suit has been brought at Indianapolis against McGrath to restrain him from making any false claim upon the public under his invalid patent, and to have declared by the United States Court what has already been determined in the United States Patent Office by proceedings in the Interference Case, No. 1,807, Sykes vs. McGrath, in which the Commissioner of Patents decided that McGrath's patent was anticipated and consequently it is invalid, so that McGrath cannot in any event make any one pay royalty.

Their circular bears the name R. McGrath, while the suit is pending against R. M. McGrath, et al, and to him was issued the patent of June 6, 1871.

We believe our patents are infringed by all patents of subsequent date, and this is not only our opinion but the opinion of a large number of attorneys and also grain men who have taken license under our patents, and by such firms as the Sandwich Manufacturing Company, Sandwich, Illinois, and the Link Belt Machinery Company Chicago, Illinois, who are now manufacturing Dumps under our various patents and paying a royalty for same.

To the Owners of Elevators with Dumps and who have not yet taken License From us:

On application I will give you the names of parties in different sections of the country who thoroughly investigated the different grain dump patents before settling with us and who have since settled. The patents under which we grant licenses are dated as follows and all are of prior date to McGrath's: October 13, 1868, No. 83,005; re-issued, December 10, 1870, No. 4,212 to Noah Swickard; October 20, 1868, No. 83,288 to Samuel C. Kenaga; November 23, 1869, No. 97,252; to Benjamin Walton; September 6, 1870, No. 107,040 to Wm. M. Hall.

It is charged by those whom we have sued or by parties working in their interest "that the certificates and letters shown by my traveling men have been obtained by complicity with the parties for the purpose of deceiving and bulldozing the unwary." The Sandwich Manufacturing Co., and the Link Belt Machinery Co., are firms who are pretty well known all over this country; and men whom we have settled with in different parts of the country are as smart and substantial business men as you will find in any country, and if the author of the charges spoken of above thinks he can bulldoze any of them let him try it. The manufacturing companies named, would hardly allow anyone to do them a wrong or bulldoze them into taking a license if they thought it was not right to do so. We are going right along with our settlements, while suits will be vigorously prosecuted.

Any further information given by addressing.

J. M. HARPER, Peoria, Ill.

GLADIATOR CORN SHELLER & CLEANER.

THOUSANDS IN USE.

PORTABLE CORN AND FEED MILLS,

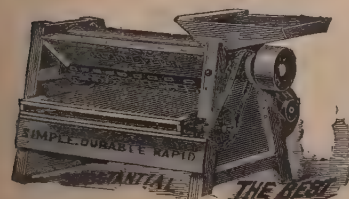
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Attention is Called to the Superior Qualities of

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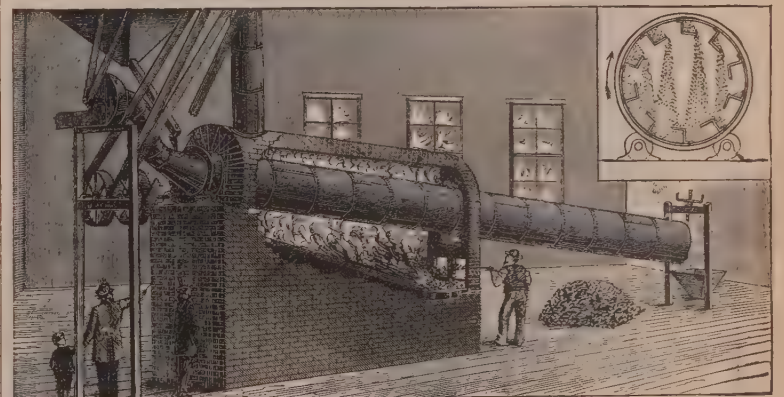
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S. E. WORRELL'S COMBINED DRIER AND COOLER

For Drying and Cooling, in one Operation,
DAMP AND MUSTY GRAIN

Of all Kinds. Particularly adapted to drying CORN for MEAL, and to the use of Elevators, for Cooling "Hot" Grain, and bringing new corn up to Grade. Machines for sale by

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Read the following strong letter of recommendation. (The italics are just as they appear in the original.)

BALTIMORE, MD., February 16, 1883.

S. E. WORRELL, Esq., Hannibal, Mo.:

DEAR SIR:—We are pleased to state that the No. 2 Drier we recently constructed and erected from your plans and drawings, for one of the largest of our elevator firms, is doing admirable service. It is drying and cooling from 50 to 60 bushels of corn per hour—some of it in a very bad condition. We have had ample means of comparison, as at the same mills and elevator they have one of the best Steam Driers, and an Oven Shelf Drier or Kiln. They find that yours does more work and better work than either. Though previously suspicious of the new-comer, they pronounce it the best.

We unhesitatingly recommend it as the most perfect Machine for the purpose, of which we have any knowledge. Very respectfully,
ZELL & DANER, Baltimore Engineering Agency.

A GREAT SAVING IN THE RUNNING OF GRAIN ELEVATORS! THE LOTZ PATENT GRAIN SHOVELING MACHINE, FOR UNLOADING CARS.

PAT. NOVEMBER 23, 1880, AND DECEMBER 14, 1880.

This machine works automatic. The hoist rope spool of each machine is driven from a line shafting by paper friction wheels, and all the mechanical movements in the machine are such that they will not wear, nor get out of order. A GREAT SAVING IN REPAIRS OF SCOOPS, in the WEARING OF ROPES, in LUBRICATING MATERIAL, and in REPAIRS ON MACHINE. The resistance on taking the scoop back into the car is much less than with other automatic machines. The length of pull of hoist rope can be instantly adjusted. The more economical operation of this machine as compared with others will pay its first cost in five years.

Eleven double machines of above construction have been set up and are in practical operation in Rock Island Elevator A, near Twelfth Street Bridge, Chicago, Ill.

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DEAR SIR—We have been using your Patent Shovel Machines in Rock Island Elevator A for several months, and are well satisfied with them. We estimate a saving of 50 per cent. on shovels, 75 per cent. on rope, and 60 per cent. on oil over all the shovels previously used by us. Yours truly,

FLINT, ODELL & CO.

For further information address

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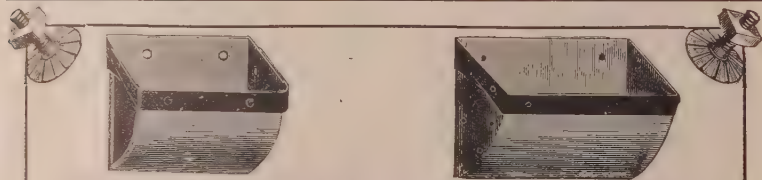
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Also Manufacturers of the Lechner Coal-Mining Machines.



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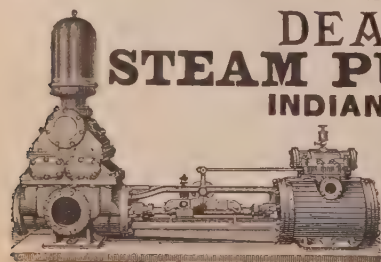
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Boiler Feeders, Fire Pumps,
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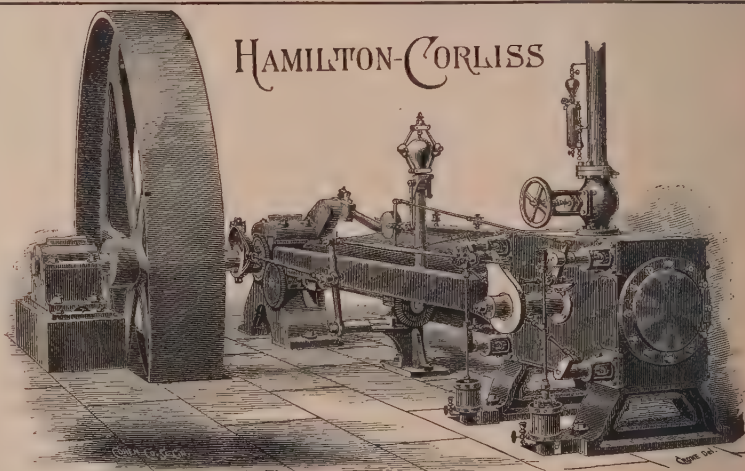
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Builds on Contract, Elevators, Flouring Mills and Bridges,

MANUFACTURERS' ELEVATOR SUPPLIES.

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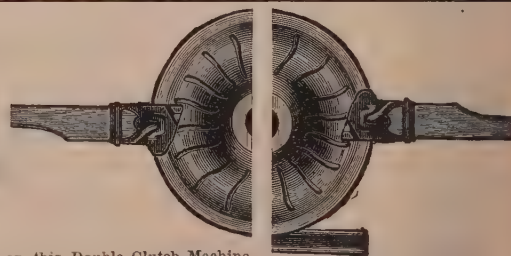
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CHICAGO CAR MOVER!

IMPROVED.



By the use of **Wedge Riser** on this Double Clutch Machine, there is no slip or break to it. The clutches are strongly braced. It has great leverage, and the purchase being greater with one man-power than any pinch-bar, and as an additional man may be applied to the lever, cars may be placed on hard tracks where other tools fail. The wheel operates it, therefore it is easy to handle. When lifting, the clutches work around the wheel freely by its own weight; therefore it is most practicable to operate. But it may be reversed on the wheel and, by **bearing down**, the car drawn to the operator. The cuts show both positions on the wheel. Thirty or 60 days' trial will be given if desired.

Address **C. T. BARNES & CO.,**
335 West Monroe Street, Chicago, Ill.

CIRCULAR GRAIN ELEVATORS.



L. C. BARNETT,

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MINNEAPOLIS, : : MINN.,

BUILDER

For all Territory West of the Mississippi.

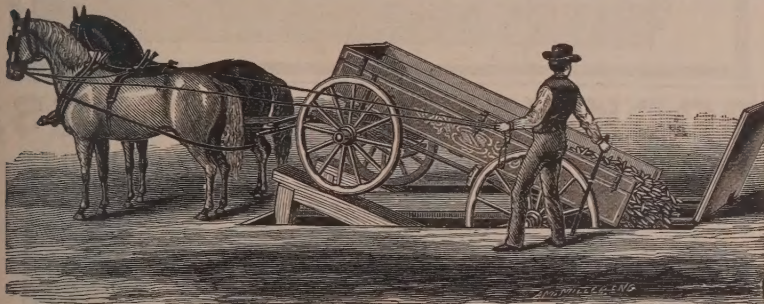
More than FIFTY in Successful Operation in the Northwest.

We can refer intending Builders to any and all of them.

The Most Storage for the Least Money,

And the

Handiest to Operate.



The above cut is a fair representation of the Rail Dump in common use, on which we are collecting a royalty for past use, and licensing parties to continue to use and also put in New Dumps. Our patents on Rail Dumps fully cover this class of Dumps. Any one using Rail Dumps can readily decide by comparing his Dump with this cut, whether he infringes or not. We also control patents that cover Platform Dumps. Our prices are reasonable in settlements for past infringements, and for licenses to continue to use the Dumps. Prices given on application. See notice below.

NOTICE.

To Parties Using Grain Dumps.

Notice is hereby given that we have been retained to prosecute infringers of the following Letters Patent on Grain Dumps:

One granted to Noah Swickard, Oct. 13, 1868, No. 88,005. Reissued Dec. 30, 1870, No. 4,212, for Improvement in Wagon and Car Unloading Apparatus.

One granted to Samuel C. Kenaga, Oct. 20, 1868, No. 83,288, for Improved Dumping Platform.

One granted to Benjamin Walton, Nov. 31, 1869, No. 97,252, for Improved Dumping Machine, and

One granted to Wm. M. Hall, Sept. 6, 1870, No. 107,040, for improvement in Grain Dumps, and all persons or parties manufacturing or using Grain Dumps which infringe on any of the above described Patents must make settlement for all past infringements, and take license in accordance with the usual terms, if they desire to continue to manufacture or use the same, or legal steps will be taken to enforce said Patents against all infringers.

Applications for licenses for using said patented improvements, and for settlement for past infringements should be addressed to

J. M. HARPER, New Opera House Building, Peoria, Ill.

BURNET & BURNET,

Complainant's Counsel, Cincinnati, Ohio.

Kerr Murray Mfg. Co.,
Ft. Wayne, Ind.

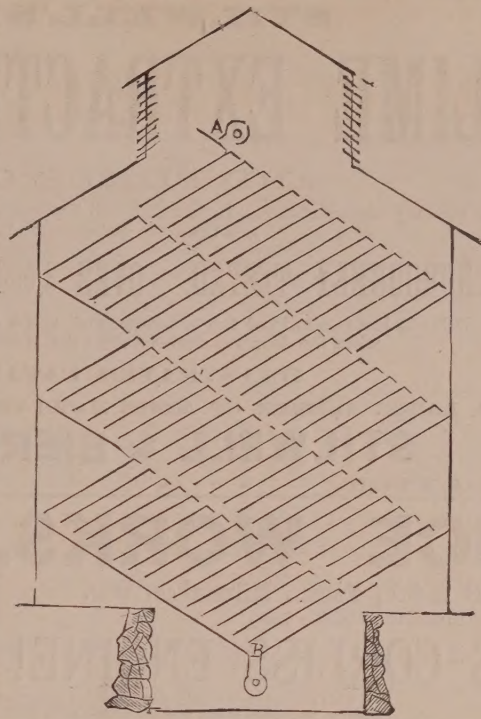
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IMPROVED STEAM SHOVEL MACHINERY.

ESTIMATES FURNISHED ON APPLICATION.



Cutler's Patent BINS

For Cooling Heated Grain,

—AND—

For Storing and Drying Damp Grain.

Requires only 30 per cent. more room than common bulk storage.

BUT

Little Difference in Cost.

Send for Circulars.

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The Chicago Rawhide Mfg Co.,
Manufacturers of

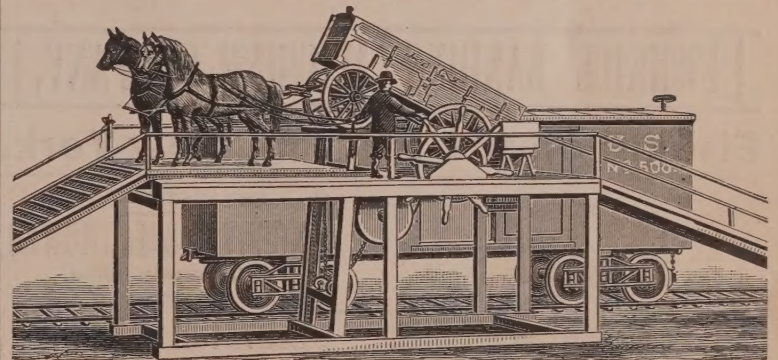
Rawhide Belting, Lace Leather & Rope,
—(Specially Adapted for)—
Elevators.

Lariats and Other Rawhide Goods of All Kinds,
BY KRUEGER'S PATENT.

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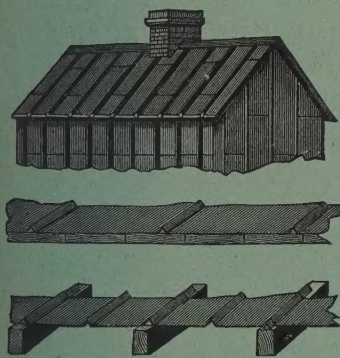
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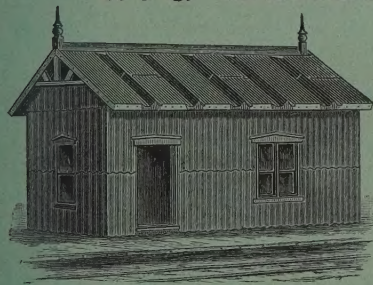
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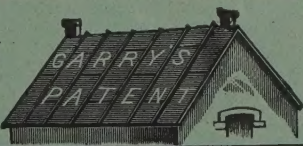
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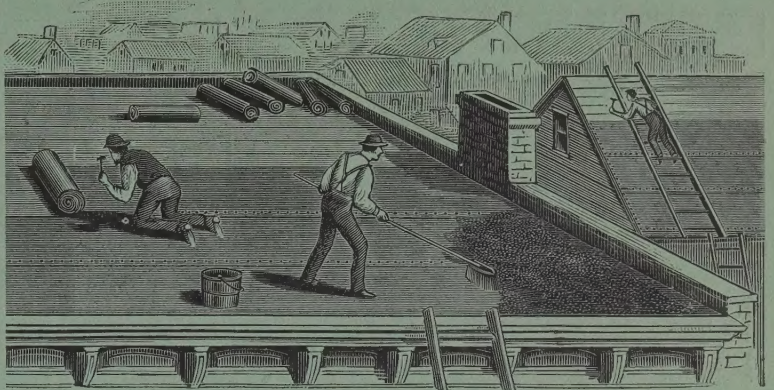
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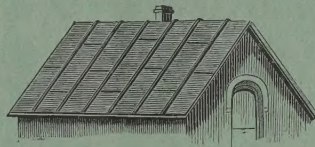
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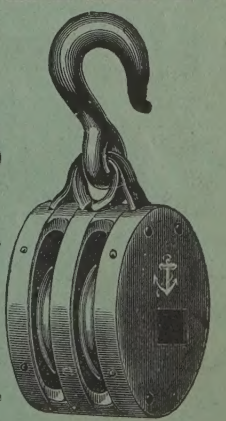
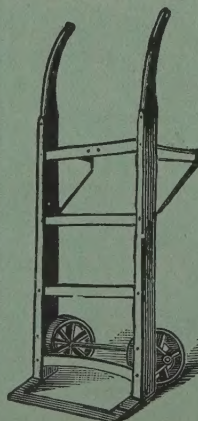
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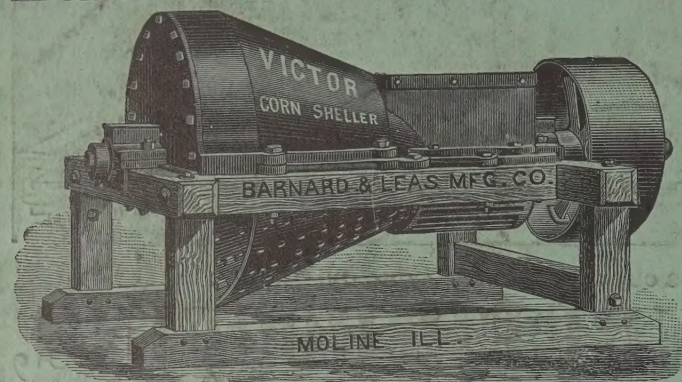
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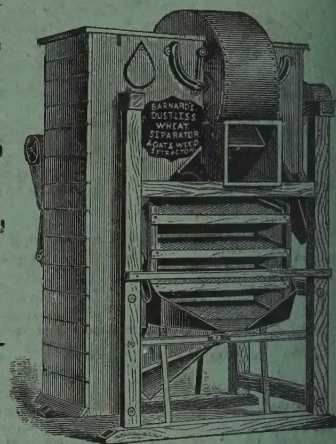
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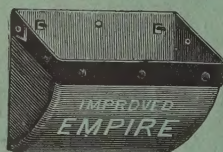
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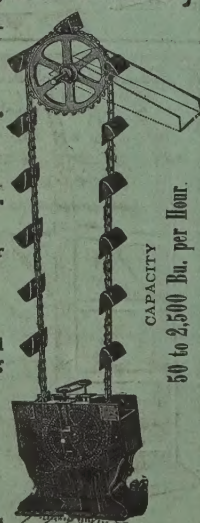
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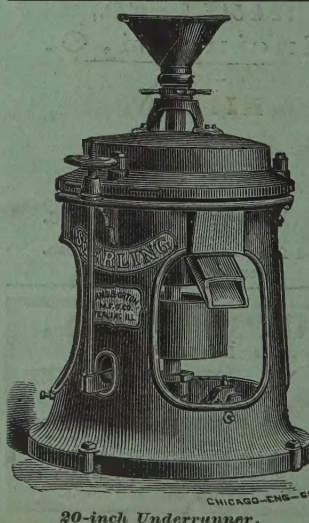
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